					DEPARTMEN					AMENDE	FOR ED REPORT		
			APPLICAT	ION FOR	PERMIT TO DRILL				1. WELL NAME and NU	JMBER I-1-46 BTR	Wasatch		
2. TYPE (OF WORK	DRILL NEW WE	ELL R	EENTER P	A WELL DEEPEN	N WELL)		3. FIELD OR WILDCAT				
4. TYPE (OF WELL		Oil Well		ed Methane Well: NO		<u> </u>		5. UNIT or COMMUNIT	FIZATION A	GREEME	NT NAM	E
6. NAME	OF OPERATO	R		BILL BARRI					7. OPERATOR PHONE	303 312-	8164		
8. ADDRI	ESS OF OPERA		099 18th Str	eet Ste 23	00, Denver, CO, 80202				9. OPERATOR E-MAIL BHilge	- ers@billbar	rettcorp.co	om	
	RAL LEASE NU AL, INDIAN, OR				11. MINERAL OWNER:	SHIP DIAN 📵	STATE 💮	FEE	12. SURFACE OWNERS	SHIP DIAN 📵	STATE () FE	E ()
13. NAM	E OF SURFAC	E OWNER (if box	12 = 'fee')						14. SURFACE OWNER	R PHONE (i	f box 12 =	'fee')	
15. ADDI	RESS OF SURF	ACE OWNER (if I	oox 12 = 'fee'	')					16. SURFACE OWNER	R E-MAIL (i	f box 12 =	: 'fee')	
		OR TRIBE NAME			18. INTEND TO COMM		RODUCTION F	FROM	19. SLANT				
(II BOX 1	2 = 'INDIAN')	Uintah and Ouray			YES (Submit (Commingli	ing Application	n) NO 📵	VERTICAL DIF	RECTIONAL	🔵 но	RIZONT	AL 📵
20. LOC	ATION OF WE	LL		F	DOTAGES	QTF	R-QTR	SECTION	TOWNSHIP	RAN	IGE	ME	RIDIAN
LOCATI	ON AT SURFA	CE		2650 F	NL 284 FWL	SV	WNW	6	4.0 S	5.0	W		U
Top of	Uppermost Pr	oducing Zone		2509 F	NL 721 FEL	SI	SENE	1	4.0 S	6.0	W		U
At Tota	l Depth			1980 F	NL 700 FWL	sv	WNW	1	4.0 S	6.0	W		U
21. COU	NTY	DUCHESNE			22. DISTANCE TO NEA	AREST LEA		et)	23. NUMBER OF ACRE	ES IN DRILI 640			
					25. DISTANCE TO NEA (Applied For Drilling		leted)	00L	26. PROPOSED DEPTI		TVD: 7580)	
27. ELEV	ATION - GROU	JND LEVEL			28. BOND NUMBER				29. SOURCE OF DRILL WATER RIGHTS APPR	OVAL NUM	BER IF AP	PLICABL	.E
		5941			Hala Casina	LPM887				43-18	30		
String	Hole Size	Casing Size	Length	Weig	Hole, Casing		x Mud Wt.	mation	Cement		Sacks	Yield	Weight
Cond	26	16	0 - 80	65.			8.8		No Used		0	0.0	0.0
Surf	12.25	9.625	0 - 2500	36.	0 J-55 ST&C		8.8	Halliburto	on Light , Type Unkr	nown	350	3.16	11.0
								Halliburton	Premium , Type Un	known	210	1.17	15.8
l1	8.75	7	0 - 8433	3 23.	0 P-110 LT&C		9.2		Unknown		370	3.14	11.0
L1	6.125	4.5	0 - 1235	6 11.	6 P-110 LT&C		9.5		Unknown No Used		410	0.0	13.5 0.0
	0.125	4.5	0 - 1233	11.					No oseu		0	0.0	0.0
					A	ATTACHN	MENTS						
	VE	RIFY THE FOL	LOWING AI	RE ATTA	CHED IN ACCORDAN	NCE WITI	H THE UTAH	OIL AND GAS	CONSERVATION G	ENERAL	RULES		
✓ v	VELL PLAT OR	MAP PREPARED I	BY LICENSED	SURVEYO	OR OR ENGINEER		СОМЫ	LETE DRILLING P	LAN				
A	FFIDAVIT OF S	TATUS OF SURFA	CE OWNER A	AGREEMEN	IT (IF FEE SURFACE)		FORM 5	5. IF OPERATOR I	S OTHER THAN THE LE	EASE OWN	ER		
№ D	IRECTIONAL S	URVEY PLAN (IF	DIRECTIONA	LLY OR H	ORIZONTALLY DRILLED	p)	тород	RAPHICAL MAP					
NAME V	'enessa Langm	acher		ТІТ	LE Senior Permit Analys	st .		PHONE 303	312-8172				
SIGNAT	URE			DA	TE 02/02/2012			EMAIL vlang	macher@billbarrettcorp	o.com			
	MBER ASSIGNE 01351216			АР	PROVAL			Bod	t Manager				

DRILLING PLAN

BILL BARRETT CORPORATION 5H-1-46 BTR Wasatch

SHL: Lot 5 (SWNW), 2650' FNL and 284' FWL, Section 6, T4S-R5W BHL: SWNW, 1980' FNL and 700' FWL, Section 1, T4S-R6W Duchesne Co., UT

Bill Barrett Corporation (BBC) intends to drill a horizontal through the prospective zone within the Wasatch.

1 - 3. <u>Estimated Tops of Geological Markers and Formations Expected to Contain Water, Oil and Gas and Other Minerals</u>

HORIZONTAL LEG FFORMATION TOPS

<u>Formation</u>	Depth – MD	Depth - TVD
Green River	2,685'	2,685'
Surface casing	2,500'	2,500'
Mahogany	3,345'	3,345'
TGR3	4,735'	4,735'
Douglas Creek	5,590'	5,590'
3 PT Marker	6,025'	6,025'
Black Shale Facies	6,445'	6,445'
Castle Peak	6,665'	6,665'
Uteland Butte	6,964'	6,964'
CR 1	7,039'	7,039'
CR 2	7,336'	7,318'
CR 3	7,662'	7,575'
*CR 4	8,265'	7,821'
TD	12,356'	7,580'

*PROSPECTIVE PAY

The Wasatch CR4 is the primary objective for oil/gas.

Base of Useable Water = 5,500'

4. <u>Casing Program</u>

Hole	SETTIN	SETTING DEPTH		SETTING DEPTH Casi		Casing	Casing		
<u>Size</u>	(FROM)	(TO)	<u>Size</u>	Weight	<u>Grade</u>	Thread	Condition		
26"	Surface	80'	16"	65#					
12-1/4"	surface	2,500'	9 5/8"	36.0 ppf	J or K 55	ST&C	New		
8 3/4"	surface	8,433'	7"	23.0 ppf	P-110	LT&C	New		
6 1/8"	surface	12,356'	4 1/2	11.6 ppf	P-110	LT&C	New		
			Liner with						
			4-1/2"						
			Tieback						
			for frac						

RECEIVED: February 02, 2012

Drilling Plan 5H-1-46 BTR Wasatch Duchesne Co., UT

5. <u>Cementing Program</u>

16" Conductor Casing	Grout
9 5/8" Surface Casing	Lead with approximately 350 sx Halliburton Light Premium
	cement with additives mixed at 11.0 ppg (yield = 3.16
	ft ³ /sx). 75% excess TOC @ Surface
	Tail with 210 sx Premium 14.8 ppg (yield = $1.36 \text{ ft}^3/\text{sx}$)
	calculated hole volume with 75% excess. TOC @ 2,000'
	Top out cement, if required: 100 sx of Premium cement with
	additives mixed at 15.8 ppg (yield = $1.17 \text{ ft}^3/\text{sk}$)
7" Intermediate Casing	Lead with approximately 370 sx Tune Light cement with
	additives, mixed at 11.0 ppg (yield = $3.14 \text{ ft}^3/\text{sx}$). TOC @
	2,100'
	Tail with approximately 410 sx Halliburton Econocem
	cement with additives mixed at 13.5 ppg (yield = 1.42
	ft ³ /sx). TOC @ 5,873'
4 ½" Liner with 4-1/2" Tieback to	No cement will be used in this section. Swell packers will
surface	be run to isolate the production hole from the intermediate
	casing section.
Note: Top of Tail cement for the in	termediate string will be calculated to 1000' above the KOP

Note: Top of Tail cement for the intermediate string will be calculated to 1000' above the KOP using gauge hole plus 50% excess. Lead to 400' inside of surface casing.

6. <u>Mud Program</u>

<u>Interval</u>	Weight	Viscosity	Fluid Loss	<u>Remarks</u>
			(API filtrate)	
40' - 2,500'	8.4 - 8.8	26 - 36	NC	Freshwater Spud Mud Fluid
				System
2,500' - 8,433'	8.9 - 9.2	26 - 36	NC	Fresh Water with sweeps
8,433' – TD	9.0 - 9.5	45 - 58	4 – 10	Fresh Water PHPA

Note: Sufficient mud materials to maintain mud properties, control lost circulation and to contain "kicks" will be available at wellsite. BBC may require minor amounts of diesel to be added to its fluid system in order to reduce torque and drag.

7. BOP and Pressure Containment Data

Depth Intervals	BOP Equipment						
0-2,500	No pressure control required						
2,500' – TD	11" 5000# Ram Type BOP						
11" 5000# Annular BOP							
- Drilling spool to a	accommodate choke and kill lines;						
- Ancillary and cho	ke manifold to be rated @ 5000 psi;						
- Ancillary equipme	ent and choke manifold rated at 5,000#. All BOP and BOPE tests will be in						
accordance with the	ne requirements of onshore Order No. 2;						
- The BLM and the	- The BLM and the State of Utah Division of Oil, Gas and Mining will be notified 24 hours in						
advance of all BC	OP pressure tests.						

- BOP hand wheels may be underneath the sub-structure of the rig if the drilling rig used is set up to operate most efficiently in this manner.

Drilling Plan 5H-1-46 BTR Wasatch Duchesne Co., UT

8. <u>Auxiliary Equipment</u>

- a) Upper kelly cock; lower Kelly cock will be installed while drilling
- b) Inside BOP or stab-in valve (available on rig floor)
- c) Safety valve(s) and subs to fit all string connections in use
- d) Mud monitoring will be visually observed

9. <u>Testing, Logging and Core Programs</u>

Cores	None anticipated;						
Testing	None anticipated; drill stem tests may be run on shows of interest;						
Sampling	30' to 50' samples; surface casing to TD. Preserve samples all show intervals;						
Surveys	MWD with GR as needed to land wellbore;						
WL Logging	None in intermediate						
Note: FMI an	Note: FMI and CAL may be run on the lateral portion of the horizontal wellbore at the geologist's						
discretion.							

10. <u>Anticipated Abnormal Pressures or Temperatures</u>

No abnormal pressures or temperatures or other hazards are anticipated.

Maximum anticipated bottom hole pressure equals approximately 3744 psi* and maximum anticipated surface pressure equals approximately 2076 psi** (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

*Max Mud Wt x 0.052 x TD = A (bottom hole pressure)

11. Location and Type of Water Supply

Water for the drilling and completion will be trucked from the Duchesne City Culinary Water Dock located in Sec. 1, T4S, R5W.

12. <u>Drilling Schedule</u>

Location Construction: June 2012 Spud: June 2012

Duration: 25 days drilling time

25 days completion time

^{**}Maximum surface pressure = A - (0.22 x TD)

Well name: BTR/LC HZ Well
Operator: BBC

String type: Surface

Location: Utah

Design parameters: Minimum design factors: Environment:

CollapseCollapse:H2S considered?NoMud weight:8.900 ppgDesign factor1.125Surface temperature:75 °FDesign is based on evacuated pipe.Bottom hole temperature:96 °F

Temperature gradient: 1.40 °F/100ft

Minimum section length: 1,000 ft
Minimum Drift: 8.750 in
Design factor 1.00 Cement top: Surface

Burst

Max anticipated surface

pressure: 527 psi Internal gradient: 0.220 psi/ft

Calculated BHP 857 psi

Annular backup: 9.50 ppg

Tension:

8 Round STC: 1.80 (J) 8 Round LTC: 1.80 (J) Buttress: 1.60 (J) Premium: 1.50 (J)

Body yield: 1.50 (B)

Tension is based on buoyed weight. Neutral point: 1,302 ft Re subsequent strings: Next setting depth:

Non-directional string.

Next setting depth: 4,697 ft
Next mud weight: 9.500 ppg
Next setting BHP: 2,318 psi
Fracture mud wt: 11.000 ppg
Fracture depth: 1500 ft

Fracture depth: Injection pressure 1,500 ft 857 psi

Run	Segment		Nominal		End	True Vert	Measured	Drift	Internal
Seq	Length (ft)	Size (in)	Weight (lbs/ft)	Grade	Finish	Depth (ft)	Depth (ft)	Diameter (in)	Capacity (ft³)
1	1500	9.625	36.00	K-55	ST&C	1500	1500	8.765	106.8
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension
Seq	Load	Strength	Design	Load	Strength	Design	Load	Strength	Design
	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(Kips)	(Kips)	Factor
1	693	2020	2.913	527	3520	6.68	47	423	9.02 J

Bill Barrett

Date: June 23,2011 Denver, Colorado

Remarks:

Collapse is based on a vertical depth of 1500 ft, a mud weight of 8.9 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name: BTR/LC HZ Well

Operator: BBC

String type: Intermediate

Location: Utah

Design parameters: Minimum design factors: Environment: Collapse Collapse: H2S considered? No Mud weight: 9.500 ppg Design factor 75 °F 1.125 Surface temperature: 161 °F Design is based on evacuated pipe. Bottom hole temperature: Temperature gradient: 1.40 °F/100ft Minimum section length: 1,500 ft Burst: Minimum Drift: 6.125 in Design factor 1.00 Cement top: 11 ft Burst Max anticipated surface pressure: 1,683 psi Internal gradient: 0.220 psi/ft Tension: Directional Info - Build & Hold Calculated BHP 3,036 psi 8 Round STC: 1.80 (J) Kick-off point 5580 ft 8 Round LTC: 1.80 (J) Departure at shoe: 604 ft Annular backup: 9.50 ppg Buttress: 1.60 (J) Maximum dogleg: 10 °/100ft Premium: 1.50 (J) Inclination at shoe: 93.1° Body yield: Re subsequent strings: 1.50 (B) Next setting depth: 5,980 ft Tension is based on buoyed weight. Next mud weight: 9.500 ppg Neutral point: 5,274 ft Next setting BHP: 2,951 psi 14.000 ppg Fracture mud wt: Fracture depth: 6,152 ft

Run	Segment		Nominal		End	True Vert	Measured	Drift	Internal
Seq	Length	Size	Weight	Grade	Finish	Depth	Depth	Diameter	Capacity
	(ft)	(in)	(lbs/ft)			(ft)	(ft)	(in)	(ft³)
1	6511	7	23.00	N-80	LT&C	6152	6511	6.25	300.9
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension
Seq	Load	Strength	Design	Load	Strength	Design	Load	Strength	Design
	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(Kips)	(Kips)	Factor
1	3036	3575	1.177	1683	6340	3.77	121	442	3.64 J

Bill Barrett

Date: June 23,2011 Denver, Colorado

Injection pressure

4,474 psi

Remarks:

Collapse is based on a vertical depth of 6152 ft, a mud weight of 9.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name: Operator:

N/A

String type:

Production Liner

BTR/LC HZ Well

Design parameters:

Collapse

Mud weight: 9.500 ppg Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor

Environment:

H2S considered? No Surface temperature: 75 °F 155 °F Bottom hole temperature:

Temperature gradient: 1.40 °F/100ft Minimum section length: 1,000 ft

Burst:

Design factor 1.00

Minimum Drift:

3.875 in

Burst

Max anticipated surface

pressure: 1,572 psi Internal gradient: 0.220 psi/ft Calculated BHP 2,837 psi

Annular backup: 9.50 ppg Tension:

8 Round STC: 8 Round LTC: Buttress:

1.60 (J) Premium: 1.50 (J) Body yield:

1.60 (B)

Liner top: Directional Info - Build & Hold

5,000 ft

Kick-off point 5123 ft Departure at shoe: 4885 ft Maximum dogleg: 8 °/100ft

Inclination at shoe: 91.26°

Tension is based on buoyed weight.

Neutral point:

5,703 ft

1.80 (J)

1.80 (J)

1.125

Run	Segment	F47	Nominal		End	True Vert	Measured	Drift	Est.
Seq	Length	Size	Weight	Grade	Finish	Depth	Depth	Diameter	Cost
	(ft)	(in)	(lbs/ft)			(ft)	(ft)	(in)	(\$)
1	5418	4.5	11.60	P-110	LT&C	5748	10418	3.875	26104
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension
Seq	Load	Strength	Design	Load	Strength	Design	Load	Strength	Design
	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(kips)	(kips)	Factor
1	2837	7580	2.672	205	10690	52.25	7.4	279	37.48 J

Bill Barrett

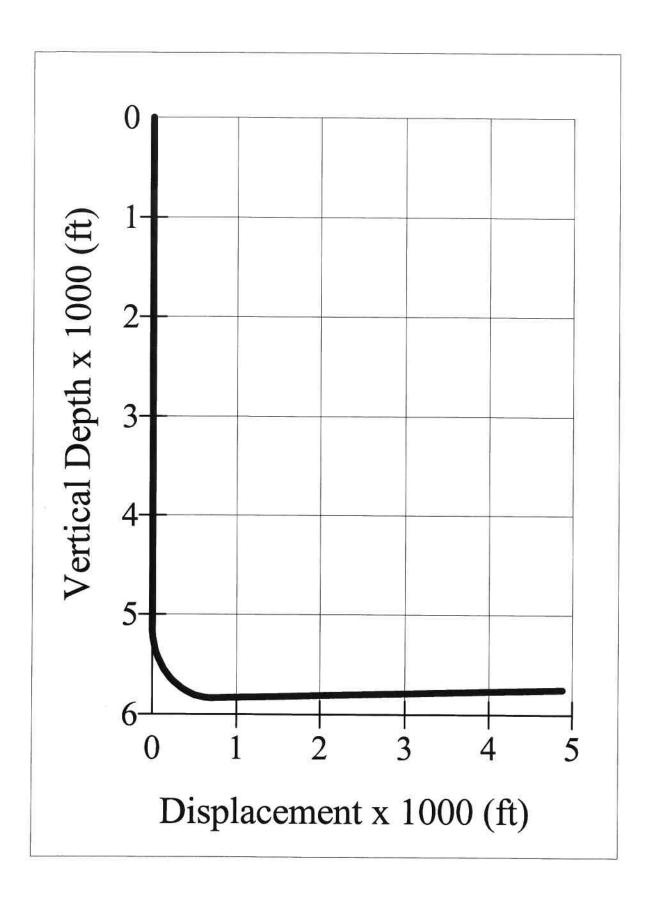
Date: June 23,2011 Denver, Colorado

Remarks:

For this liner string, the top is rounded to the nearest 100 ft. Collapse is based on a vertical depth of 5748 ft, a mud weight of 9.5 ppg. The Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a



PRESSURE CONTROL EQUIPMENT – Schematic Attached

A. Type: Eleven (11) Inch Double Gate Hydraulic BOP with Eleven (11) Inch Annular Preventer. The blow out preventer will be equipped as follows:

- 1. One (1) blind ram (above).
- 2. One (1) pipe ram (below).
- 3. Drilling spool with two (2) side outlets (choke side 3-inch minimum, kill side 2-inch minimum).
- 4. 3-inch diameter choke line.
- 5. Two (2) choke line valves (3-inch minimum).
- 6. Kill line (2-inch minimum).
- 7. Two (2) chokes with one (1) remotely controlled from the rig floor.
- 8. Two (2) kill line valves, and a check valve (2-inch minimum).
- 9. Upper and lower kelly cock valves with handles available.
- 10. Safety valve(s) & subs to fit all drill string connections in use.
- 11. Inside BOP or float sub available.
- 12. Pressure gauge on choke manifold.
- 13. Fill-up line above the uppermost preventer.

B. Pressure Rating: 5,000 psi

C. Testing Procedure:

Annular Preventer

At a minimum, the Annular Preventer will be pressure tested to 50% of the rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum the above pressure test will be performed:

- 1. When the annular preventer is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition, the Annular Preventer will be functionally operated at least weekly.

Blow-Out Preventer

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yieldstrength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be

maintained for a period of at least ten (10) minutes or until the requirmentsof the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the BOP is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

D. Choke Manifold Equipment:

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration.

E. Accumulator:

The accumulator will have sufficient capacity to open the hydraulically-controlled choke line valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psi above precharge on the closing manifold without the use of closing unit pumps. The fluid reservoir capacity will be double the usable fluid volume of the accumulator system capacity and the fluid level of the reservoir will be maintained at the manufacturer's recommendations.

The BOP system will have two (2) independent power sources to close the preventers. Nitrogen bottles (3 minimum) will be one (1) of these independent power sources and will maintain a charge equal to the manufacturer's specifications.

The accumulator precharge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six (6) months thereafter. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum limits specified in the *Onshore Oil & Gas Order Number 2*.

A manual locking device (i.e. hand wheels) or automatic locking device will be installed on all systems of 2M or greater. A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls for all 3M or greater systems will be capable of closing all preventers. Remote controls for 5M or greater systems will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

F. Miscellaneous Information:

The Blow-Out Preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*. The hydraulic BOP closing unit will be located at least twenty-five (25) feet from the well head but readily accessible to the driller. Exact locations and configurations of the hydraulic BOP closing unit will depend upon the particular rig contracted to drill this hole.

A flare line will be installed after the choke manifold, extending 125 feet (minimum) from the center of the drill hole to a separate flare pit.

LATITUDE = $40^{\circ}09'42.97"$ (40.161936) LONGITUDE = $110^{\circ}30'03.64"$ (110.501011)

LATITUDE = 40°09'43.12" (40.161978) LONGITUDE = 110°30'01.08" (110.500300)

NAD 27 (SURFACE LOCATION)

= SECTION CORNERS

(Not Set on Ground.)

RE-ESTABLISHED.

RECEIVED: February 02, 2012

FILE

G.L.O. PLAT

BILL BARRETT CORPORATION

C.N.

T.A.

COLD

WEATHER

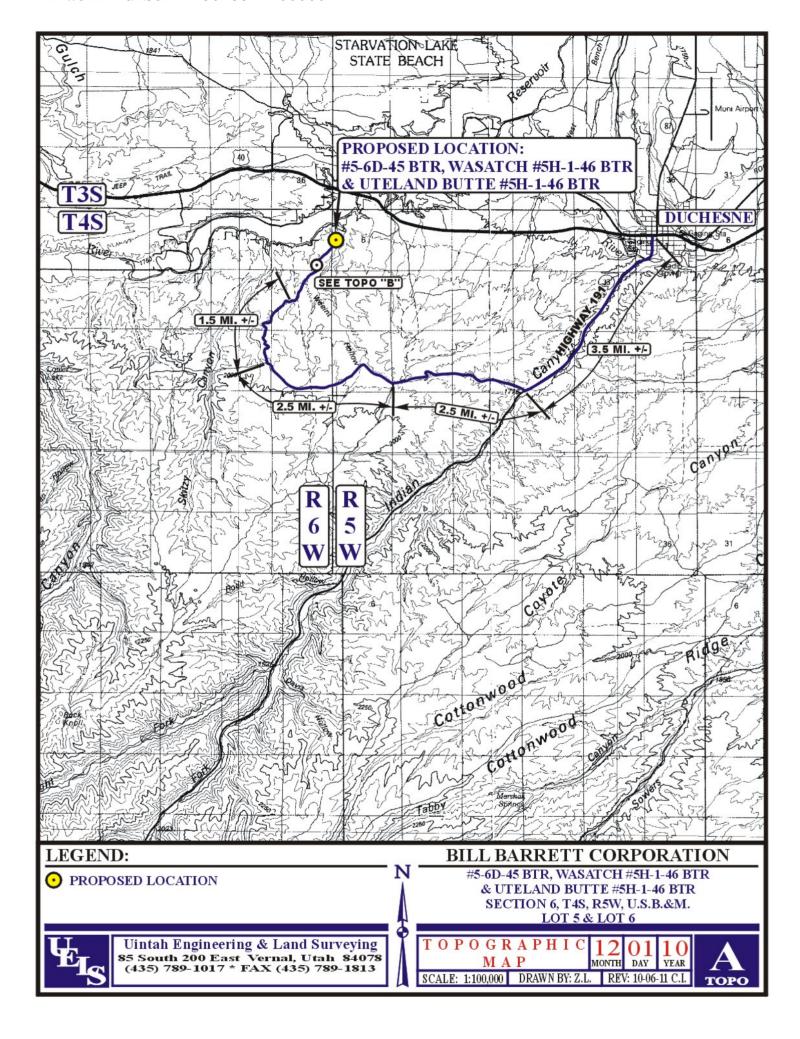
LATITUDE = $40^{\circ}09'49.90''$ (40.163861)

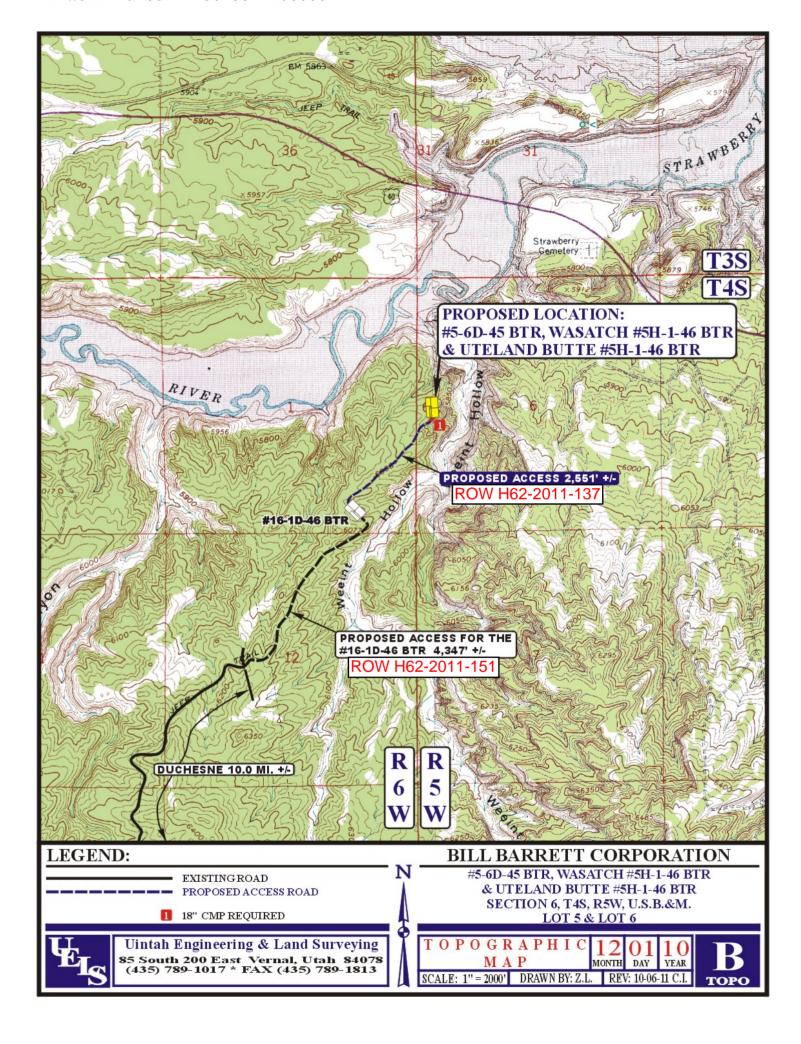
LONGITUDE = $110^{\circ}31'03.97"$ (110.517769)

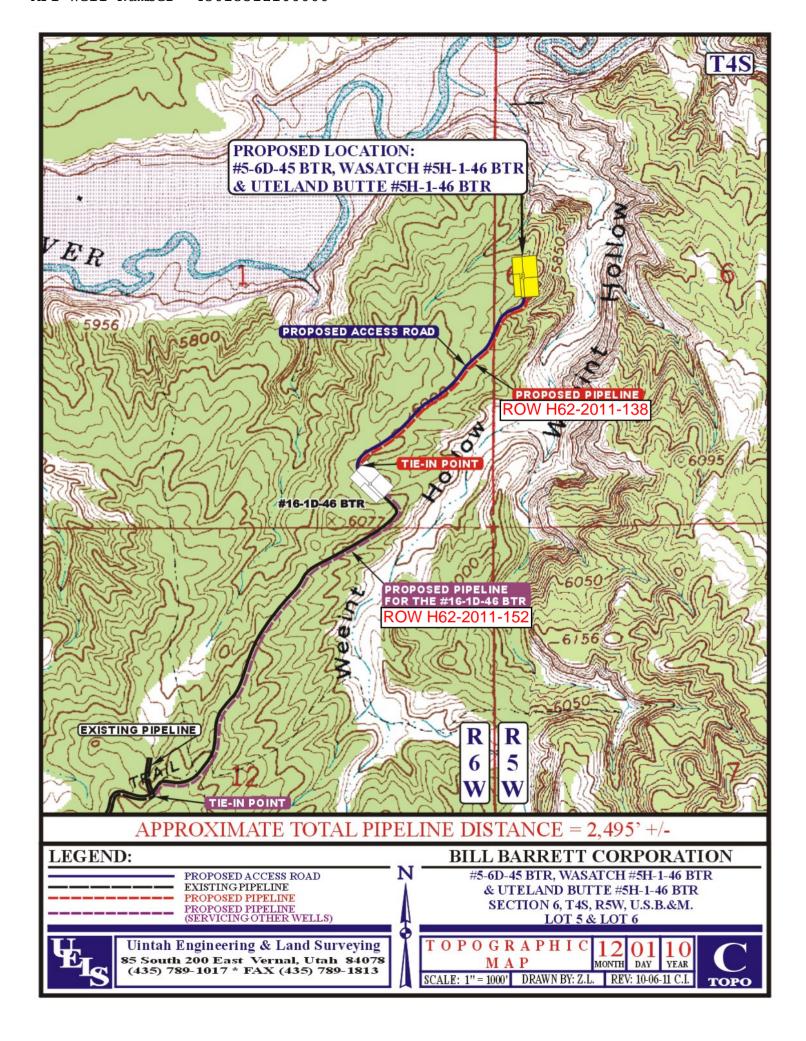
(Not Set on Ground.)

BILL BARRETT CORPORATION

COLD







API Well Number: 43013512160000

Bill Barrett Corporation

COMPANY DETAILS: BILL BARRETT CORP

Calculation Method: Minimum Curvature

Error System: ISCWSA

Scan Method: Closest Approach 3D Error Surface: Elliptical Conic Warning Method: Error Ratio SITE DETAILS: 5H-1-46 TW BTR

Blacktail Ridge

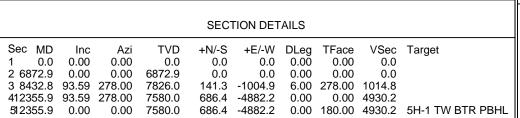
Site Centre Latitude: 40° 9' 43.121 N

Longitude: 110° 30' 1.080 W

Positional Uncertainity: 0.0 Convergence: 0.64 Local North: True

		WE	LLBORE TAF	RGET DETAILS (LAT	/LONG)	
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
5H-1 TW BTR PBHL	7580.0	686.4	-4882.2	40° 9' 49.900 N	110° 31' 3.968 W	Rectangle (Sides: L200.0 W200.0)

2250



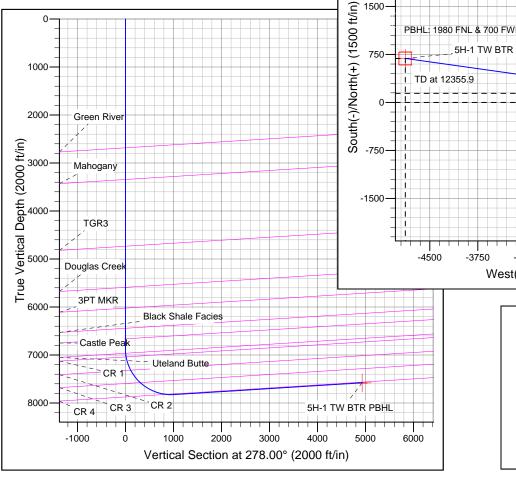
FORMATION TOP DETAILS Formation TVDPath MDPath 2685.0 2685.0 Green River 3345.0 3345.0 Mahogany 4735.0 4735.0 TGR3 5590.0 5590.0 **Douglas Creek** 6025.0 6025.0 3PT MKR 6445.0 6445.0 **Black Shale Facies** Castle Peak 6665.0 6665.0 **Uteland Butte** 6964.7 6964.9 7039.9 7039.1 CR 1 7336.0 CR 2 7318.1 7575.7 7662.7 CR3

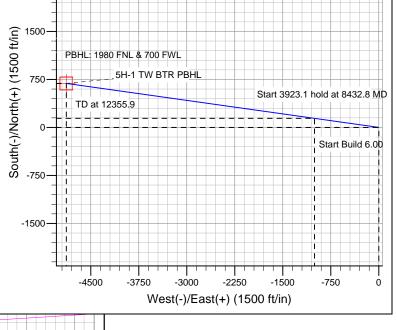
CR 4

7821.8 8265.6

CASING DETAILS

No casing data is available





BILL BARRETT CORP

DUCHESNE COUNTY, UT (NAD 27) 5H-1-46 TW BTR 5H-1-46 TW BTR

5H-1-46 TW BTR

Plan: Design #1

Standard Planning Report

27 December, 2011

Planning Report

Database: Compass

Company: BILL BARRETT CORP

 Project:
 DUCHESNE COUNTY, UT (NAD 27)

 Site:
 5H-1-46 TW BTR

 Well:
 5H-1-46 TW BTR

Wellbore: 5H-1-46 TW BTR
Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well 5H-1-46 TW BTR

KB @ 5956.0ft (Original Well Elev) KB @ 5956.0ft (Original Well Elev)

True

Minimum Curvature

Project DUCHESNE COUNTY, UT (NAD 27)

Map System: US State Plane 1927 (Exact solution)

Geo Datum: NAD 1927 (NADCON CONUS)

Map Zone: Utah Central 4302

System Datum: Ground Level

Site 5H-1-46 TW BTR

Northing: 667,607.37 ft Site Position: Latitude: 40° 9' 43.121 N From: Lat/Long Easting: 2,279,393.88 ft Longitude: 110° 30' 1.080 W **Position Uncertainty:** 0.0 ft Slot Radius: **Grid Convergence:** 0.64 °

.....

 Well Position
 +N/-S +E/-W
 0.0 ft 0.0 ft
 Northing: 667,607.37 ft 2,279,393.88 ft 2,279,393.88 ft Longitude: 110° 30' 1.080 W

Position Uncertainty 0.0 ft Wellhead Elevation: ft Ground Level: 5,941.0 ft

Wellbore 5H-1-46 TW BTR Field Strength Magnetics **Model Name** Sample Date Declination **Dip Angle** (nT) (°) (°) IGRF2010 11/30/2011 11.45 65.79 52.222

Design #1 Design **Audit Notes:** Version: Phase: PLAN Tie On Depth: 0.0 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.0 278.00 0.0 0.0

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,872.9	0.00	0.00	6,872.9	0.0	0.0	0.00	0.00	0.00	0.00	
8,432.8	93.59	278.00	7,826.0	141.3	-1,004.9	6.00	6.00	0.00	278.00	
12,355.9	93.59	278.00	7,580.0	686.4	-4,882.2	0.00	0.00	0.00	0.00	
12,355.9	0.00	0.00	7,580.0	686.4	-4,882.2	0.00	0.00	0.00	180.00 5	SH-1 TW BTR PBHL

Planning Report

Database: Compass

Company: BILL BARRETT CORP

 Project:
 DUCHESNE COUNTY, UT (NAD 27)

 Site:
 5H-1-46 TW BTR

 Well:
 5H-1-46 TW BTR

 Wellbore:
 5H-1-46 TW BTR

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well 5H-1-46 TW BTR

KB @ 5956.0ft (Original Well Elev) KB @ 5956.0ft (Original Well Elev)

True

Measured Depth (ft)	nclination (*) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	(°) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Vertical Depth (ft) 0.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0 1,000.0	+N/-S (ft) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	+E/-W (ft) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Vertical Section (ft) 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Dogleg Rate (°/100ft) 0.00 0.00 0.00 0.00 0.00	Build Rate (°/100ft) 0.00 0.00 0.00 0.00 0.00	Turn Rate (°/100ft) 0.00 0.00 0.00 0.00 0.00
Depth (ft) 0.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0 1,000.0 1,100.0 1,200.0 1,300.0 1,400.0 1,500.0 1,600.0 1,700.0 1,800.0 1,700.0 2,000.0 2,100.0 2,200.0 2,300.0 2,400.0 2,500.0 2,685.0 Green River 2,700.0 2,800.0 2,900.0 3,000.0 3,100.0 3,200.0 3,300.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	(°) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Depth (ft) 0.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	(ft) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 (ft) 0.0 0.0 0.0 0.0 0.0 0.0	Rate (°/100ft) 0.00 0.00 0.00 0.00 0.00	Rate (°/100ft) 0.00 0.00 0.00 0.00 0.00	Rate (°/100ft) 0.00 0.00 0.00 0.00
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200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0 1,000.0 1,100.0 1,200.0 1,300.0 1,400.0 1,500.0 1,600.0 1,700.0 1,800.0 2,000.0 2,100.0 2,200.0 2,300.0 2,400.0 2,685.0 Green River 2,700.0 2,800.0 2,800.0 2,800.0 3,000.0 3,100.0 3,200.0 3,300.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00
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1,600.0 1,700.0 1,800.0 1,900.0 2,000.0 2,100.0 2,200.0 2,300.0 2,400.0 2,500.0 2,600.0 2,685.0 Green River 2,700.0 2,800.0 3,000.0 3,100.0 3,200.0 3,300.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0		0.00 0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
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2,100.0 2,200.0 2,300.0 2,300.0 2,400.0 2,500.0 2,600.0 2,685.0 Green River 2,700.0 2,800.0 3,000.0 3,100.0 3,200.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00	0.00 0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0 2,200.0 2,300.0 2,300.0 2,400.0 2,500.0 2,600.0 2,685.0 Green River 2,700.0 2,800.0 3,000.0 3,100.0 3,200.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00	0.00 0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0 2,300.0 2,300.0 2,400.0 2,500.0 2,600.0 2,685.0 Green River 2,700.0 2,800.0 3,000.0 3,100.0 3,200.0 3,345.0 Mahogany 3,400.0 3,500.0 3,500.0 3,700.0 3,800.0	0.00		2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0 2,400.0 2,500.0 2,600.0 2,685.0 Green River 2,700.0 2,800.0 3,000.0 3,100.0 3,200.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0									
2,400.0 2,500.0 2,600.0 2,685.0 Green River 2,700.0 2,800.0 3,000.0 3,100.0 3,200.0 3,300.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00		2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0 2,600.0 2,685.0 Green River 2,700.0 2,800.0 3,000.0 3,100.0 3,200.0 3,300.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00		2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0 2,685.0 Green River 2,700.0 2,800.0 3,000.0 3,100.0 3,200.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00	0.00 0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0 2,685.0 Green River 2,700.0 2,800.0 3,000.0 3,100.0 3,200.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00	0.00 0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,685.0 Green River 2,700.0 2,800.0 2,900.0 3,000.0 3,100.0 3,200.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0									
Green River 2,700.0 2,800.0 2,900.0 3,000.0 3,100.0 3,200.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00		2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0 2,800.0 2,900.0 3,000.0 3,100.0 3,200.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00	0.00 0.00	2,685.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0 2,900.0 3,000.0 3,100.0 3,200.0 3,300.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0									
2,900.0 3,000.0 3,100.0 3,200.0 3,300.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0	0.00	0.00 0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0 3,000.0 3,100.0 3,200.0 3,300.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0	0.00	0.00 0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0 3,100.0 3,200.0 3,300.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0									
3,100.0 3,200.0 3,300.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0	0.00		2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0 3,300.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0	0.00		3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0 3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00	0.00 0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,345.0 Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00		3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
Mahogany 3,400.0 3,500.0 3,600.0 3,700.0 3,800.0									
3,400.0 3,500.0 3,600.0 3,700.0 3,800.0	0.00	0.00 0.00	3,345.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0 3,600.0 3,700.0 3,800.0									
3,500.0 3,600.0 3,700.0 3,800.0	0.00	0.00 0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0 3,700.0 3,800.0	0.00		3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0 3,800.0			3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00		3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
	0.00 0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
	0.00	0.00 0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
	0.00 0.00 0.00		3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00 0.00 0.00 0.00		4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00 0.00 0.00 0.00 0.00		4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
	0.00 0.00 0.00 0.00 0.00 0.00								
4,200.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00		4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0		4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00	4,400.0						
4,500.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00	,	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00		0.0	0.0	0.0	0.00	0.00	0.00
4,735.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	4,700.0			0.0	0.00	0.00	0.00

Planning Report

Database: Compass

Company: **BILL BARRETT CORP**

Project: DUCHESNE COUNTY, UT (NAD 27) 5H-1-46 TW BTR Site: Well: 5H-1-46 TW BTR 5H-1-46 TW BTR Wellbore:

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well 5H-1-46 TW BTR

KB @ 5956.0ft (Original Well Elev) KB @ 5956.0ft (Original Well Elev)

True

libore: sign:	Design #1	,,,,,							
anned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
TGR3									
4,800.0 4,900.0	0.00 0.00	0.00 0.00	4,800.0 4,900.0	0.0 0.0	0.0 0.0	0.0 0.0	0.00 0.00	0.00 0.00	0.00 0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,590.0	0.00	0.00	5,590.0	0.0	0.0	0.0	0.00	0.00	0.00
Douglas Cre	ek								
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,025.0	0.00	0.00	6,025.0	0.0	0.0	0.0	0.00	0.00	0.00
3PT MKR									
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0 6,400.0	0.00 0.00	0.00 0.00	6,300.0 6,400.0	0.0 0.0	0.0 0.0	0.0 0.0	0.00 0.00	0.00 0.00	0.00 0.00
6,445.0	0.00	0.00	6,445.0	0.0	0.0	0.0	0.00	0.00	0.00
Black Shale 6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,665.0	0.00	0.00	6,665.0	0.0	0.0	0.0	0.00	0.00	0.00
Castle Peak									
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,872.9	0.00	0.00	6,872.9	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	1.63	278.00	6,900.0	0.1	-0.4	0.4	6.00	6.00	0.00
6,964.9	5.52	278.00	6,964.7	0.6	-4.4	4.4	6.00	6.00	0.00
Uteland But									
7,000.0	7.63	278.00	6,999.6	1.2	-8.4	8.4	6.00	6.00	0.00
7,039.9	10.02	278.00	7,039.1	2.0	-14.4	14.6	6.00	6.00	0.00
CR 1									
7,100.0	13.63	278.00	7,097.9	3.7	-26.6	26.9	6.00	6.00	0.00
7,200.0	19.63	278.00	7,193.6	7.7	-54.9	55.5	6.00	6.00	0.00
7,300.0	25.63	278.00	7,285.9	13.1	-93.0 100.1	93.9	6.00	6.00	0.00
7,336.0 CR 2	27.79	278.00	7,318.1	15.3	-109.1	110.1	6.00	6.00	0.00
	04.00	070.00	7.070.0	10.7	440.4	444.0	2.22	2.22	2.22
7,400.0	31.63	278.00	7,373.6	19.7	-140.4	141.8	6.00	6.00	0.00
7,500.0 7,600.0	37.63 43.63	278.00 278.00	7,455.9 7,531.8	27.7 36.7	-196.7 -261.1	198.6 263.7	6.00 6.00	6.00 6.00	0.00 0.00
7,600.0 7,662.7	43.63 47.38	278.00	7,531.6 7,575.7	30.7 42.9	-305.4	308.4	6.00	6.00	0.00
CR 3	17.55	2, 0.00	. ,5. 5	12.0	300. F	300.1	0.00	0.00	0.00
7,700.0	49.63	278.00	7,600.4	46.8	-333.1	336.4	6.00	6.00	0.00
7,800.0	55.63	278.00	7,661.1	57.9	-411.7	415.8	6.00	6.00	0.00
7,800.0	61.63	278.00 278.00	7,001.1 7,713.1	57.9 69.8	-411.7 -496.2	415.8 501.1	6.00	6.00	0.00
8,000.0	67.63	278.00	7,713.1 7,755.9	82.3	-496.2 -585.7	501.1 591.4	6.00	6.00	0.00
8,100.0	73.63	278.00	7,789.1	95.5	-679.1	685.7	6.00	6.00	0.00
8,200.0	79.63	278.00	7,812.2	109.0	-775.3	783.0	6.00	6.00	0.00

Planning Report

Database: Compass

Company: BILL BARRETT CORP

 Project:
 DUCHESNE COUNTY, UT (NAD 27)

 Site:
 5H-1-46 TW BTR

 Well:
 5H-1-46 TW BTR

Wellbore: 5H-1-46 TW BTR

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well 5H-1-46 TW BTR

KB @ 5956.0ft (Original Well Elev) KB @ 5956.0ft (Original Well Elev)

True

n:	Design #1								
ned Survey									
Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth (ft)	Inclination (°)	Azimuth (°)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Section (ft)	Rate (°/100ft)	Rate (°/100ft)	Rate (°/100ft)
8,265.6	83.56	278.00	7,821.8	118.0	-839.6	847.8	6.00	6.00	0.00
CR 4									
8,300.0	85.63	278.00	7,825.1	122.8	-873.5	882.1	6.00	6.00	0.00
8,400.0	91.63	278.00	7,827.4	136.7	-972.5	982.0	6.00	6.00	0.00
8,432.8	93.59	278.00	7,826.0	141.3	-1,004.9	1,014.8	6.00	6.00	0.00
8,500.0	93.59	278.00	7,821.7	150.6	-1,071.3	1,081.9	0.00	0.00	0.00
8,600.0	93.59	278.00	7,815.5	164.5	-1,170.2	1,181.7	0.00	0.00	0.00
8,700.0	93.59	278.00	7,809.2	178.4	-1,269.0	1,281.5	0.00	0.00	0.00
8,800.0	93.59	278.00	7,802.9	192.3	-1,367.8	1,381.3	0.00	0.00	0.00
8,900.0	93.59	278.00	7,796.7	206.2	-1,466.6	1,481.1	0.00	0.00	0.00
9,000.0	93.59	278.00	7,790.4	220.1	-1,565.5	1,580.9	0.00	0.00	0.00
9,100.0	93.59	278.00	7,784.1	234.0	-1,664.3	1,680.7	0.00	0.00	0.00
9,200.0	93.59	278.00	7,777.9	247.9	-1,763.1	1,780.5	0.00	0.00	0.00
9,300.0	93.59	278.00	7,771.6	261.8	-1,862.0	1,880.3	0.00	0.00	0.00
9,400.0	93.59	278.00	7,765.3	275.7	-1,960.8	1,980.1	0.00	0.00	0.00
9,500.0	93.59	278.00	7,759.0	289.6	-2,059.6	2,079.9	0.00	0.00	0.00
9,600.0	93.59	278.00	7,752.8	303.5	-2,158.5	2,179.7	0.00	0.00	0.00
9,700.0	93.59	278.00	7,746.5	317.4	-2,257.3	2,279.5	0.00	0.00	0.00
9,800.0	93.59	278.00	7,740.2	331.2	-2,356.1	2,379.3	0.00	0.00	0.00
9,900.0	93.59	278.00	7,734.0	345.1	-2,455.0	2,479.1	0.00	0.00	0.00
10,000.0	93.59	278.00	7,727.7	359.0	-2,553.8	2,578.9	0.00	0.00	0.00
10,100.0	93.59	278.00	7,721.4	372.9	-2,652.6	2,678.7	0.00	0.00	0.00
10,200.0	93.59	278.00	7,715.2	386.8	-2,751.5	2,778.5	0.00	0.00	0.00
10,300.0	93.59	278.00	7,708.9	400.7	-2,850.3	2,878.3	0.00	0.00	0.00
10,400.0	93.59	278.00	7,702.6	414.6	-2,949.1	2,978.1	0.00	0.00	0.00
10,500.0	93.59	278.00	7,696.4	428.5	-3,047.9	3,077.9	0.00	0.00	0.00
10,600.0	93.59	278.00	7,690.1	442.4	-3,146.8	3,177.7	0.00	0.00	0.00
10,700.0	93.59	278.00	7,683.8	456.3	-3,245.6	3,277.5	0.00	0.00	0.00
10,800.0	93.59	278.00	7,677.5	470.2	-3,344.4	3,377.3	0.00	0.00	0.00
10,900.0	93.59	278.00	7,671.3	484.1	-3,443.3	3,477.1	0.00	0.00	0.00
11,000.0	93.59	278.00	7,665.0	498.0	-3,542.1	3,576.9	0.00	0.00	0.00
11,100.0	93.59	278.00	7,658.7	511.9	-3,640.9	3,676.7	0.00	0.00	0.00
11,200.0	93.59	278.00	7,652.5	525.8	-3,739.8	3,776.5	0.00	0.00	0.00
11,300.0	93.59	278.00	7,646.2	539.7	-3,838.6	3,876.3	0.00	0.00	0.00
11,400.0	93.59	278.00	7,639.9	553.6	-3,937.4	3,976.2	0.00	0.00	0.00
11,500.0	93.59	278.00	7,633.7	567.5	-4,036.3	4,076.0	0.00	0.00	0.00
11,600.0	93.59	278.00	7,627.4	581.3	-4,135.1	4,175.8	0.00	0.00	0.00
11,700.0	93.59	278.00	7,621.1	595.2	-4,233.9	4,275.6	0.00	0.00	0.00
11,800.0	93.59	278.00	7,614.9	609.1	-4,332.8	4,375.4	0.00	0.00	0.00
11,900.0	93.59	278.00	7,608.6	623.0	-4,431.6	4,475.2	0.00	0.00	0.00
12,000.0	93.59	278.00	7,602.3	636.9	-4,530.4	4,575.0	0.00	0.00	0.00
12,100.0	93.59	278.00	7,596.0	650.8	-4,629.3	4,674.8	0.00	0.00	0.00
12,200.0	93.59	278.00	7,589.8	664.7	-4,728.1	4,774.6	0.00	0.00	0.00
12,300.0	93.59	278.00	7,583.5	678.6	-4,826.9	4,874.4	0.00	0.00	0.00
12,355.9	0.00	0.00	7,580.0	686.4	-4,882.2	4,930.2	167.39	-167.39	0.00

Bill Barrett Corp

Planning Report

Database: Compass

Project:

Company: BILL BARRETT CORP

DUCHESNE COUNTY, UT (NAD 27)

 Site:
 5H-1-46 TW BTR

 Well:
 5H-1-46 TW BTR

 Wellbore:
 5H-1-46 TW BTR

 Design:
 Design #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well 5H-1-46 TW BTR

KB @ 5956.0ft (Original Well Elev) KB @ 5956.0ft (Original Well Elev)

True

ormations						
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	2,685.0	2,685.0	Green River		-3.59	278.00
	3,345.0	3,345.0	Mahogany		-3.59	278.00
	4,735.0	4,735.0	TGR3		-3.59	278.00
	5,590.0	5,590.0	Douglas Creek		-3.59	278.00
	6,025.0	6,025.0	3PT MKR		-3.59	278.00
	6,445.0	6,445.0	Black Shale Facies		-3.59	278.00
	6,665.0	6,665.0	Castle Peak		-3.59	278.00
	6,964.9	6,965.0	Uteland Butte		-3.59	278.00
	7,039.9	7,040.0	CR 1		-3.59	278.00
	7,336.0	7,325.0	CR 2		-3.59	278.00
	7,662.7	7,595.0	CR 3		-3.59	278.00
	8,265.6	7,875.0	CR 4		-3.59	278.00

SURFACE USE PLAN

BILL BARRETT CORPORATION

5-6D-45 BTR Well Pad

Lot 5 (SWNW), 2634' FNL and 283' FWL, Section 6, T4S-R5W, USB&M (surface hole) Lot 5 (SWNW), 2090' FNL and 810' FWL, Section 6, T4S-R5W, USB&M (bottom hole) Duchesne County, Utah

5H-1-46 BTR Uteland Butte
Lot 6 (NWSW), 2666' FNL & 286' FWL, Sec. 6, T4S-R5W, USB&M (surface hole)
SWNW, 1980' FNL & 700' FWL, Sec. 1, T4S-R6W, USB&M (bottom hole)

Duchesne County, Utah

5H-1-46 BTR Wasatch

Lot 5 (SWNW), 2650' FNL & 284' FWL, Sec. 6, T4S-R5W, USB&M (surface hole) SWNW, 1980' FNL & 700' FWL, Sec. 1, T4S-R6W, USB&M (bottom hole) Duchesne County, Utah

The 5-6D-45 BTR was previously approved by the BLM on 08/17/2011 with secured right of ways from the BIA for the wellpad (H62-2011-137), access road (H62-2011-137) and pipeline (H62-2011-138). BBC now plans to add two horizontal wells to be drilled from this pad. Because of this addition of wells, it was necessary to expand the pad area 15', 0.105 acres (from 3.151 acres to 3.256 acres). BIA concurrence was received on 12/13/2011 (see letter attached) and an administrative modification for existing right of way on tribal lands was approved on 01/19/2012 (see ROW amendment attached).

The excavation contractor would be provided with an approved copy of the surface use plan of operations before initiating construction.

1. <u>Existing Roads:</u>

- a. The proposed well site is located approximately 11.3 miles southwest of Duchesne, Utah. Maps and directions reflecting the route to the proposed well site are included (see Topographic maps A and B).
- b. The existing State Highway 191 would be utilized from Duchesne for 3.5 miles to the existing BBC maintained Skitzy Road that would be utilized for 5 miles to the existing access for the 6-12-46 BTR. The access for the proposed 16-1D-46 BTR would be utilized to access this location.
- c. Project roads would require routine year-round maintenance to provide year-round access. Maintenance would include inspections, reduction of ruts and holes, maintenance to keep water off the road, replacement of surfacing materials, and clearing of sediment blocking ditches and culverts. Should snow removal become necessary, roads would be cleared with a motor grader and snow would be stored along the down gradient side to prohibit runoff onto the road. Aggregate would be used as necessary to maintain a solid running surface and minimize dust generation.
- d. Vehicle operators would obey posted speed restrictions and observe safe speeds commensurate with road and weather conditions. Travel would be limited to the existing access roads and proposed access road.

Bill Barrett Corporation Surface Use Plan 5-6D-45 BTR Well Pad (5H-1-46 BTR UB & 5H-1-46 BTR TW) Duchesne County, UT

- e. The use of roads under State and Duchesne County Road Department maintenance are necessary to access the project area with no improvements proposed. No encroachment or pipeline crossing permits are required.
- f. All existing roads would be maintained and kept in good repair during all phases of operation.

2. Planned Access Road:

- a. Approximately 2,551 feet of access road trending northeast was previously approved under ROW H62-2011-137 and is planned from the approved 16-1D-46 BTR access road (ROW H62-2011-151). The 16-1D-46 BTR access continues an additional 4,347 feet to the existing 6-12-46 BTR well site access road (see Topographic Map B).
- b. The planned access road would be constructed to a 30-foot ROW width with an 18-foot travel surface. See section 12.d. below for disturbance estimates.
- c. New road construction and improvements of existing roads would typically require the use of motor graders, crawler tractors, 10-yard end dump trucks, and water trucks. The standard methodology for building new roads involves the use of a crawler tractor or track hoe to windrow the vegetation to one side of the road corridor, remove topsoil to the opposing side of the corridor, and rough-in the roadway. This is followed by a grader or bulldozer to establish barrow ditches and crown the road surface. Where culverts are required, a track hoe or backhoe would trench the road and install the culverts. Some hand labor would be required when installing and armoring culverts. Road base or gravel in some instances would be necessary and would be hauled in and a grader used to smooth the running surface.
- d. The proposed road would be constructed to facilitate drainage, control erosion and minimize visual impacts by following natural contours where practical. No unnecessary side-casting of material would occur on steep slopes.
- e. A maximum grade of 10% would be maintained throughout the project with minimum cuts and fills, as necessary, to access the well.
- f. Excess rock from construction of the pad may be used for surfacing of the access road if necessary. Any additional aggregate necessary would be obtained from private or State of Utah lands in conformance with applicable regulations. Aggregate would be of sufficient size, type, and amount to allow all weather access and alleviate dust.
- g. Where topsoil removal is necessary, it would be windrowed (i.e. stockpiled/accumulated along the edge of the ROW and in a low row/pile parallel with the ROW) and re-spread over the disturbed area after construction and backfilling are completed.

Bill Barrett Corporation Surface Use Plan 5-6D-45 BTR Well Pad (5H-1-46 BTR UB & 5H-1-46 BTR TW) Duchesne County, UT

Vegetation removed from the disturbed area would also be re-spread to provide protection, nutrient recycling, and a seed source for reclamation.

- h. Turnouts are not proposed.
- One 18 inch culvert or low-water crossing as the road enters the pad is anticipated. Adequate drainage structures, where necessary, would be incorporated into the remainder of the road to prevent soil erosion and accommodate all-weather traffic.
- j. No gates or cattle guards are anticipated at this time.
- k. Surface disturbance and vehicular travel would be limited to the approved location access road. Adequate signs would be posted, as necessary, to warn the public of project related traffic.
- All access roads and surface disturbing activities would conform to the
 appropriate standard, **no higher than necessary**, to accommodate their intended
 function adequately as outlined in the Bureau of Land Management and Forest
 Service publication: <u>Surface Operating Standards for Oil and Gas Exploration</u>
 and <u>Development</u>, Fourth Edition Revised 2007.
- m. The operator would be responsible for all maintenance needs of the new access road.

3. <u>Location of Existing Wells (see One-Mile Radius Map):</u>

a. Following is a list of wells with surface hole locations within a one-mile radius of the proposed pad:

i.	water wells	none
ii.	injection wells	none
iii.	disposal wells	none
iv.	drilling wells	none
v.	temp shut-in wells	none
vi.	producing wells	one
vii.	abandoned wells	three

4. <u>Location of Production Facilities</u>

a. Surface facilities would consist of a wellhead, separator, gas meter, combustor, (1) 500 gal methanol tank, (1) 500 glycol tank, (3) 500 bbl oil tanks, (1) 500 bbl water tank, (1) 500 bbl test tank, (1) 1000 gal propane tank, a pumping unit or Roto-flex unit or ESP or gas lift unit, electrical or with a natural gas or diesel fired motor, solar panels, solar chemical and methanol pumps and one trace pump. See attached proposed facility diagram.

Bill Barrett Corporation Surface Use Plan 5-6D-45 BTR Well Pad (5H-1-46 BTR UB & 5H-1-46 BTR TW) Duchesne County, UT

- b. Most wells would be fitted with a pump jack or Roto-flex unit or ESP or gas lift to assist liquid production. The prime mover for pump jacks or Roto-flex units would be small (100 horsepower or less), electric motor or natural gas or diesel fired internal combustion engines. If a gas lift is installed, it would be set on a 10 ft x 25 ft pad and the prime mover would be a natural gas-fired internal combustion engine rated at 200 horsepower or less or an electric compressor of similar horsepower powered by electricity.
- a. The tank battery would be surrounded by a secondary containment berm of sufficient capacity to contain 1.1 times the entire capacity of the largest single tank and sufficient freeboard to contain precipitation. All loading lines and valves would be placed inside the berm surrounding the tank battery or would utilize catchment basins to contain spills. All liquid hydrocarbon production and measurement shall conform to the provisions of 43 CFR 3162.7-2 and Onshore Oil and Gas Order No. 4 for the measurement of oil.
- b. Gas meter run(s) would be constructed and located on lease within 500 feet of the wellheads. Meter runs would be housed and/or fenced. As practicably feasible, meters would be equipped with remote telemetry monitoring systems. All gas production and measurement shall comply with the provisions of 43 CFR 3162.7-3, Onshore Oil and Gas Order No. 5, and American Gas Association (AGA) Report No. 3.
- c. A combustor may be installed at this location for control of associated condensate tank emissions. A combustor ranges from 24 inches to 48 inches wide and is approximately 27 ft tall. Combustor placement would be on existing disturbance.
- d. Approximately 2,495 feet of pipeline corridor (see Topographic Map C) containing up to three lines (one gas pipeline up to 8 inch in diameter, one water line up to 4 inch in diameter and one residue line up to 4 inch in diameter) was previously approved under ROW H62-2011-138, trending southwest to the approved 16-1D-46 BTR pipeline corridor (ROW H62-2011-152). The 16-1D-46 BTR pipeline corridor continues 4,347' to the existing pipeline corridor for the 6-12-46 BTR. Pipelines would be constructed of steel, polyethylene or fiberglass and would connect to the proposed pipeline servicing nearby BBC wells. The pipeline crosses entirely Ute Tribe surface.
- e. The new segment of gas pipeline would be surface laid within a 30 foot wide pipeline corridor adjacent to the proposed access road. See 12.d below for disturbance estimates.
- f. Construction of the ROW would temporarily utilize the 30 foot disturbed width for the road for a total disturbed width of 60 foot for the road and pipeline corridors. The use of the proposed well site and access roads would facilitate the staging of the pipeline construction.

Bill Barrett Corporation Surface Use Plan 5-6D-45 BTR Well Pad (5H-1-46 BTR UB & 5H-1-46 BTR TW) Duchesne County, UT

- g. Pipeline construction methods and practices would be planned and conducted by BBC with the objective of enhancing reclamation and fostering the reestablishment of the native plant community.
- h. All permanent above-ground structures would be painted a flat, non-reflective color, such as Beetle Green, to match the standard environmental colors. All facilities would be painted the designated color at the time of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded.
- i. Site security guidelines identified in 43 CFR 3162.7-5 and Onshore Oil and Gas Order No. 3 would be adhered to. Any modifications to proposed facilities would be reflected in the site security diagram submitted.
- j. The site would require periodic maintenance to ensure that drainages are kept open and free of debris, and that surfaces are properly treated to reduce erosion, fugitive dust, and impacts to adjacent areas.

5. <u>Location and Type of Water Supply:</u>

a. Water for the drilling and completion would be trucked from any of the following locations:

Water Right No. and Application or Change No.	Applicant	Allocation	Date	Point of Diversion	Source
43-180	Duchesne City	5 cfs	8/13/2004	Knight	Duchesne
	Water Service District			Diversion Dam	River
43-1202, Change a13837	Myton City	5.49 cfr and	3/21/1986	Knight	Duchesne
		3967 acre feet		Diversion Dam	River
43-10444, Appln	Duchesne	2 cfs	1994	Ditch at	Cow Canyon
A57477	County Upper			Source	Spring
	Country Water				
43-10446, Appln F57432	Duchesne	1.58 cfs	1994	Ditch at	Cow Canyon
	County Upper			Source	Spring
	Country Water				
43-1273, Appln A17462	J.J.N.P.	7 cfs	1946	Strawberry	Strawberry
	Company			River	River
43-1273, Appln t36590	J.J.N.P.	4 cfs	6/03/2010	Strawberry	Strawberry
	Company			River	River
43-2505, Appln t37379	McKinnon	1.3 cfs	4/28/2011	Pumped from	Water Canyon
	Ranch			Sec, 17,	Lake
	Properties, LC			T4SR6W	
43-12415, Change	Peatross	1.89 cfs	09/2011	Dugout Pond	Strawberry

Bill Barrett Corporation Surface Use Plan 5-6D-45 BTR Well Pad (5H-1-46 BTR UB & 5H-1-46 BTR TW) Duchesne County, UT

Water Right No. and Application or Change No.	Applicant	Allocation	Date	Point of Diversion	Source
A17215a	Ranch, LLC				River

- b. No new water well is proposed with this application.
- c. Should additional water sources be pursued they would be properly permitted through the State of Utah Division of Water Rights.
- d. Water use would vary in accordance with the formations to be drilled but would be up to approximately 5.41 acre feet for drilling and completion operations.

6. Source of Construction Material:

- a. The use of materials would conform to 43 CFR 3610.2-3.
- b. No construction materials would be removed from the lease or EDA area.
- c. If any additional gravel is required, it would be obtained from a local supplier having a permitted source of materials within the general area.

7. <u>Methods of Handling Waste Disposal:</u>

- a. All wastes associated with this application would be contained and disposed of utilizing approved facilities.
- b. The reserve pit would be constructed so as not to leak, break or allow any discharge.
- c. The reserve would be lined with 12 mil (minimum) thickness polyethylene nylon reinforced liner material. The liner(s) would overlay straw, dirt and/or bentonite if rock is encountered during excavation. The liner would overlap the pit walls and be covered with dirt and/or rocks to hold them in place. No trash, scrap pipe, or other materials that could puncture the liner would be discarded in the pit. A minimum of two feet of free board would be maintained between the maximum fluid level and the top of the reserve pit at all times.
- d. To deter livestock from entering the pit, the three sides exterior to the location would be fenced before drilling starts. Following the conclusion of drilling and completion activities, the fourth side would also be fenced.
- e. Drill cuttings would be contained in the pit and buried on-site for a period not to exceed six months, weather permitting

Bill Barrett Corporation Surface Use Plan 5-6D-45 BTR Well Pad (5H-1-46 BTR UB & 5H-1-46 BTR TW) Duchesne County, UT

f. Produced fluids from the well other than water would be decanted into steel test tank(s) until such time as construction of production facilities is completed. Any oil that may be accumulated would be transferred to a permanent production tank. Produced water may be used in further drilling and completion activities, evaporated in the pit, or would be hauled to one of the state-approved disposal facilities below:

Disposal Facilities

- 1. RNI Industries, Inc. Pleasant Valley Disposal Pits, Sec. 25, 26, 35 & 36, T4S-R3W
- 2. Pro Water LLC Blue Bench 13-1 Disposal Well (43-013-30971) NENE, Sec. 13, T3S-R5W
- 3. RN Industries, Inc. Bluebell Disposal Ponds, Sec. 2, 4 & 9, T2S-R2W
- 4. Water Disposal, Inc. Harmston 1-32-A1 Disposal Well (43-013-30224), UTR #00707, Sec. 32, T1S-R1W
- 5. Unified Water Pits Sec. 31, T2S-R4W
- 6. Iowa Tank Line Pits 8500 BLM Fence Road, Pleasant Valley
- g. Any salts and/or chemicals, which are an integral part of the drilling system, would be disposed of in the same manner as the drilling fluid.
- h. Any spills of oil, condensate, produced or frac water, drilling fluids, or other potentially deleterious substances would be recovered and either returned to its origin or disposed of at an approved disposal site, most likely in Duchesne, Utah.
- i. Chemicals on the EPA's Consolidated List of Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) may be used or stored in quantities over reportable quantities. In the course of drilling, BBC could potentially store and use diesel fuel, sand (silica), hydrochloric acid, and CO₂ gas, all described as hazardous substances in 40 CFR Part 302, Section 302.4, in quantities exceeding 10,000 pounds. In addition, natural gas condensate and crude oil and methanol may be stored or used in reportable quantities. Small quantities of retail products (paint/spray paints, solvents {e.g., WD-40}, and lubrication oil) containing non-reportable volumes of hazardous substances may be stored and used on site at any time. No extremely hazardous substances, as defined in 40 CFR 355, would be used, produced, stored, transported or disposed of in association with the drilling, testing or completion of the wells.
- j. Portable toilets and trash containers would be located onsite during drilling and completion operations. A commercial supplier would install and maintain portable toilets and equipment and would be responsible for removing sanitary waste. Sanitary waste facilities (i.e. toilet holding tanks) would be regularly pumped and their contents disposed of at approved sewage disposal facilities in Duchesne, and/or Uintah Counties, in accordance with applicable rules and regulations regarding sewage treatment and disposal. Accumulated trash and nonflammable waste materials would be hauled to an approved landfill once a

Bill Barrett Corporation Surface Use Plan 5-6D-45 BTR Well Pad (5H-1-46 BTR UB & 5H-1-46 BTR TW) Duchesne County, UT

> week or as often as necessary. All debris and waste materials not contained in the trash containers would be cleaned up, removed from the construction ROW, well pad, or worker housing location, and disposed of at an approved landfill. Trash would be cleaned up everyday.

- k. Sanitary waste equipment and trash bins would be removed from the Project Area upon completion of access road or pipeline construction; following drilling and completion operations at an individual well pad; when worker housing is no longer needed; or as required.
- 1. A flare pit may be constructed a minimum of 110' from the wellhead(s) and may be used during completion work. In the event a flare pit proves to be unworkable, a temporary flare stack or open top tank would be installed. BBC would flow back as much fluid and gas as possible into pressurized vessels, separating the fluids from the gas. In some instances, due to the completion fluids utilized within the Project Area, it is not feasible to direct the flow stream from the wellbore through pressurized vessels. In such instances BBC proposes to direct the flow to the open top tanks until flow through the pressurized vessels is feasible. At which point the fluid would either be returned to the reserve pit or placed into a tank(s). The gas would be directed to the flare pit, flare stack (each with a constant source of ignition), or may be directed into the sales pipeline.
- m. Hydrocarbons would be removed from the reserve pit would as soon as practical. In the event immediate removal is not practical, the reserve pit would be flagged overhead or covered with wire or plastic mesh to protect migrating birds.

8. Ancillary Facilities:

- a. Garbage containers and portable toilets would be located on the well pad.
- b. On well pads where active drilling and completion is occurring, temporary housing would be provided on location for the well pad supervisor, geologist, tool pusher, and others that are required to be on location at all times. The well pad could include up to five single wide mobile homes or fifth wheel campers/trailers.

9. Well Site Layout:

- a. The well would be properly identified in accordance with 43 CFR 3162.6.
- b. The pad layout, cross section diagrams and rig layout are enclosed (see Figures 1 and 2).
- c. The pad and road designs are consistent with industry specifications.
- d. The pad has been staked at its maximum size of 415 feet x 255 (previously approved at 400 feet x 255) feet with an inboard reserve pit size of 70 feet x 235 feet x 8 feet deep. See section 12.d below for disturbance estimates.

Bill Barrett Corporation Surface Use Plan 5-6D-45 BTR Well Pad (5H-1-46 BTR UB & 5H-1-46 BTR TW) Duchesne County, UT

- e. Within the approved well pad location, a crawler tractor would strip whatever topsoil is present and stockpile it along the edge of the well pad for use during reclamation. Vegetation would be distributed along the sides of the well pad.
- f. Fill from pit excavation would be stockpiled along the edge of the pit and the adjacent edge of the well pad.
- g. Use of erosion control measures, including proper grading to minimize slopes, diversion terraces and ditches, mulching, terracing, riprap, fiber matting, temporary sediment traps, and broad-based drainage dips or low water crossings would be employed by BBC as necessary and appropriate to minimize erosion and surface runoff during well pad construction and operation. Cut and fill slopes would be constructed such that stability would be maintained for the life of the activity.
- h. All cut and fill slopes would be such that stability can be maintained for the life of the activity.
- i. Diversion ditches would be constructed, if necessary, around the well site to prevent surface waters from entering the well site area.
- j. Water application may be implemented if necessary to minimize the amount of fugitive dust.
- k. All surface disturbing activities would be supervised by a qualified, responsible company representative who is aware of the terms and conditions of the APD and specifications in the approved plans.

10. Plan for Restoration of the Surface:

- a. A site specific reclamation plan will be submitted within 90 days of location construction.
- b. Site reclamation would be accomplished for portions of the well pad not required for the continued operation of the well on this pad within six months of completion, weather permitting.
- c. The operator would control noxious weeds along access road use authorizations and well site by spraying or mechanical removal, according to the Utah Noxious Weed Act and as set forth in the approved surface damage agreements.
- d. Rat and mouse holes would be filled and compacted from bottom to top immediately upon release of the drilling rig from location. Upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1. The reserve pit would be allowed to dry prior to the commencement of backfilling work.

Bill Barrett Corporation Surface Use Plan 5-6D-45 BTR Well Pad (5H-1-46 BTR UB & 5H-1-46 BTR TW) Duchesne County, UT

No attempts would be made to backfill the reserve pit until it is free of standing water. Once dry, the liner would be torn and perforated before backfilling.

- e. The reserve pit and that portion of the location not needed for production facilities/operations would be recontoured to the approximate natural contours. Areas not used for production purposes would be backfilled and blended into the surrounding terrain, reseeded and erosion control measures installed. Mulching, erosion control measures and fertilization may be required to achieve acceptable stabilization. Back slopes and fore slopes would be reduced as practical and scarified with the contour. The reserved topsoil would be evenly distributed over the slopes and scarified along the contour. Slopes would be seeded with the Ute Tribe specified seed mix.
- f. Topsoil salvaged from the drill site and stored for more than one year would be placed at the location indicated on the well site layout drawing and graded to a depth optimum to maintain topsoil viability, seeded with the Ute Tribe prescribed seed mixture and covered with mulch for protection from wind and water erosion and to discourage the invasion of weeds.

11. Surface and Mineral Ownership:

- a. Surface ownership Ute Indian Tribe 988 South 7500 East; Ft. Duchesne, Utah 84026; 435-725-4982.
- b. Mineral ownership Ute Indian Tribe 988 South 7500 East; Ft. Duchesne, Utah 84026; 435-725-4982.

12. Other Information:

- a. Montgomery Archeological Consultants has conducted a Class III archeological survey. A copy of the report has been submitted under separate cover to the appropriate agencies by Montgomery as report 10-270 dated 1-17-2011. No additional archeological work is needed for the 15' pad expansion.
- BBC would require that their personnel, contractors, and subcontractors to comply with Federal regulations intended to protect archeological and cultural resources.

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- c. Project personnel and contractors would be educated on and subject to the following requirements:
 - No dogs or firearms within the Project Area.
 - No littering within the Project Area.
 - Smoking within the Project Area would only be allowed in off-operator active locations or in specifically designated smoking areas. All cigarette butts would be placed in appropriate containers and not thrown on the ground or out windows of vehicles; personnel and contractors would abide by all fire restriction orders.
 - Campfires or uncontained fires of any kind would be prohibited.
 - Portable generators used in the Project Area would have spark arrestors.

d. Disturbance estimates:

Approximate Acreage Disturbances

Well Pad		3.256	acres
Access	2,551 feet	1.757	acres
Pipeline	2,495 feet	1.718	acres

Total 6.731 acres

Bill Barrett Corporation Surface Use Plan 5-6D-45 BTR Well Pad (5H-1-46 BTR UB & 5H-1-46 BTR TW) Duchesne County, UT

OPERATOR CERTIFICATION

Certification:

I hereby certify that I, or someone under my direction supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein would be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application and that bond coverage is provided under Bill Barrett Corporations federal nationwide bond. These statements are subject to the provisions of 18 U.S.C. 1001 for the filings of false statements.

2nd day of February 2012 Venessa Langmacher Executed this

Name: Position Title: Senior Permit Analyst

1099 18th Street, Suite 2300, Denver, CO 80202 Address:

Telephone: 303-312-8172

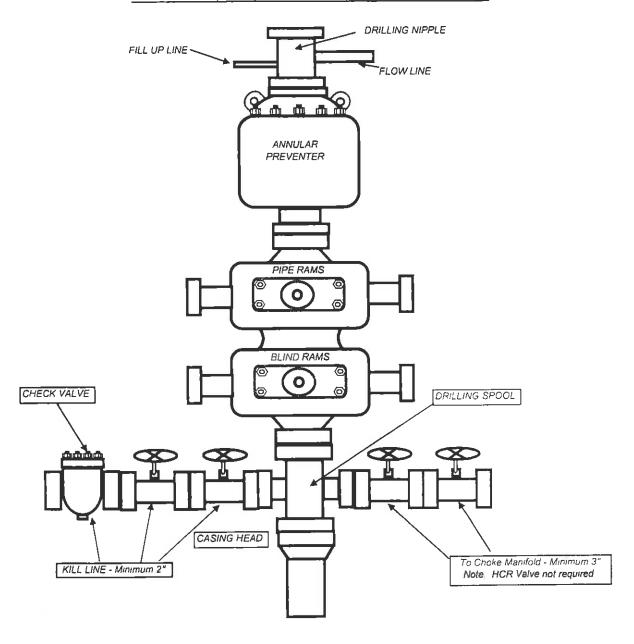
vlangmacher@billbarrettcorp.com E-mail: Field Representative Kary Eldredge / Bill Barrett Corporation Address: 1820 W. Highway 40, Roosevelt, UT 84066 Telephone: 435-725-3515 (office); 435-724-6789 (mobile)

E-mail: keldredge@billbarrettcorp.com

Venessa Langmacher, Senior Permit Analyst

BILL BARRETT CORPORATION

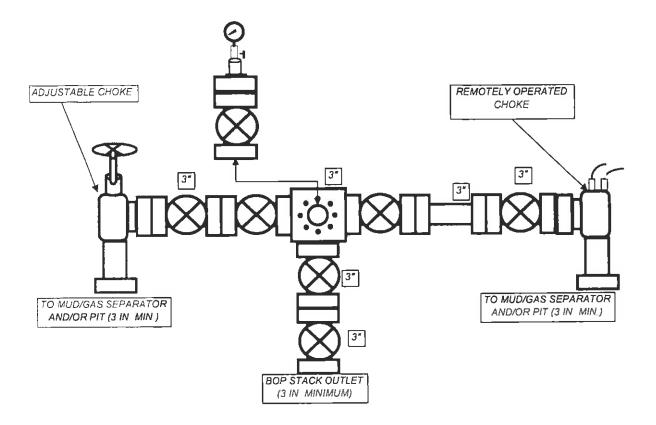
TYPICAL 5,000 p.s.i. BLOWOUT PREVENTER



API Well Number: 43013512160000

BILL BARRETT CORPORATION

TYPICAL 5,000 p.s.i. CHOKE MANIFOLD



API Well Number: 43013512160000



February 2, 2012

Ms. Diana Mason – Petroleum Technician STATE OF UTAH DIVISION OF OIL, GAS AND MINING 1594 West North Temple, Suite 1210 P. O. Box 145801 Salt Lake City, Utah 84114-5801

Re:

Exception Location – WASATCH #5H-1-46 BTR – Blacktail Ridge Area

Surface Location: 2,650' FNL, 284' FWL, Lot 5 (SWNW), Section 6-T4S-R5W

Bottom Location: 1,980' FNL, 700' FWL, SWNW, Section 1-T4S-R6W

Duchesne County, Utah

Dear Ms. Mason,

Bill Barrett Corporation ("BBC") hereby submits an exception location letter in accordance with Oil & Gas Conservation Order #139-84, requesting an exception well location, supported by the following information:

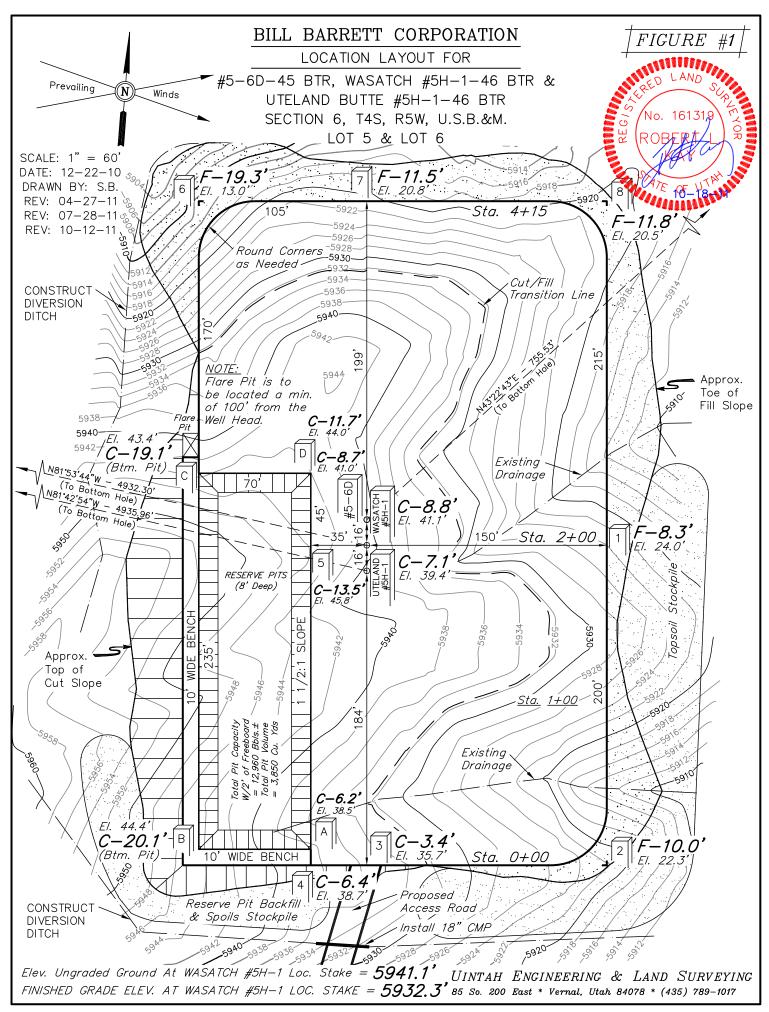
- The location is within our Blacktail Ridge Area.
- BBC is requesting an exception to Spacing Order #139-84 by drilling multiple well bores from a single well pad where the horizontal wellbore will strictly produce hydrocarbons from the Uteland Butte formation and the other vertical wellbore will produce from formations excluding the Uteland Butte. This well configuration results in the wellbores being closer than the 1,320 feet allowed by spacing order.
- This will allow for a more efficient drainage of the reservoir formation being targeted.
- The exception location is due to topography requirements and to minimize surface disturbance.
- BBC certifies that it is the working interest owner along with Ute Energy, LLC (who also consent to this exception location request), and together we own 100% of the working interest within 460 feet of the proposed well location.
- Our rights are owned under an Exploration and Development Agreement with the Ute Indian Tribe and Ute Distribution Corporation which provides for the drilling of exploratory wells. This agreement provides that we consult with these owners regarding the drilling of this well.

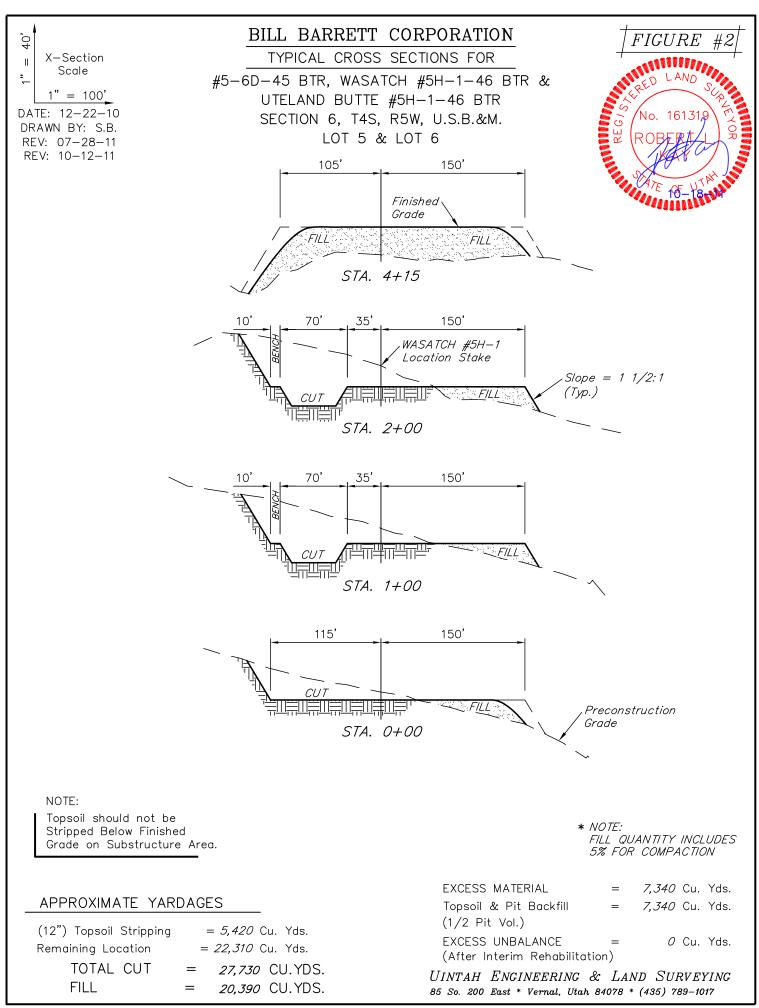
Based on the information provided, BBC requests the Division grant this exception to the locating, siting and spacing requirements of Order #139-84. Should you have any questions or need further information, please contact me at 303-312-8544.

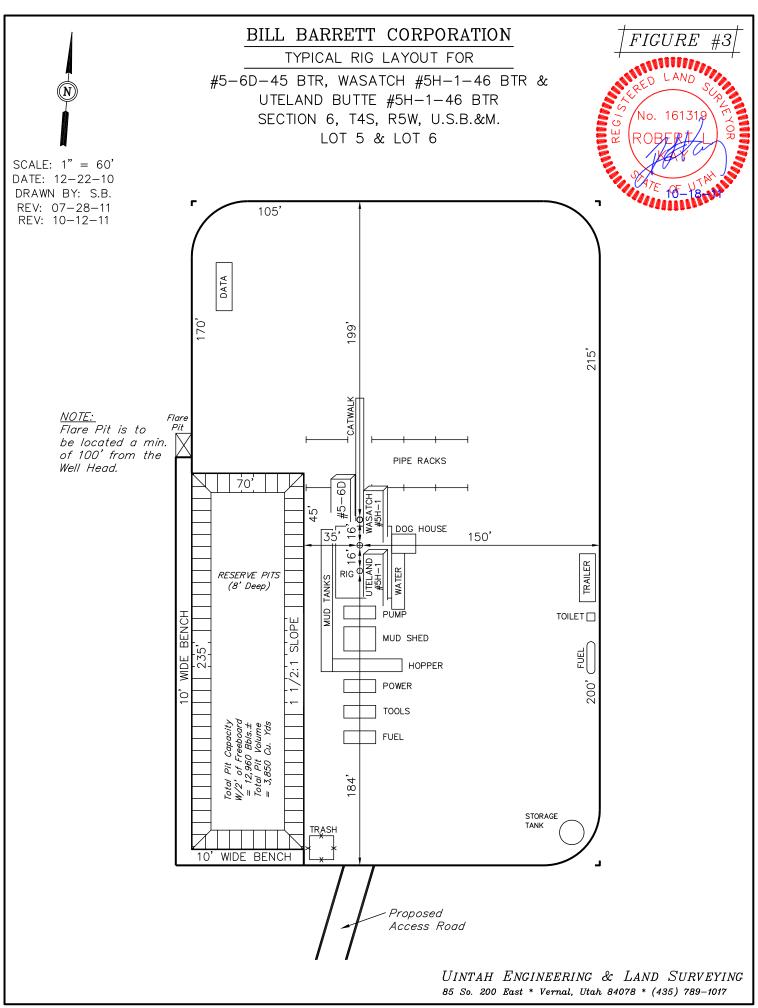
Sincerely,

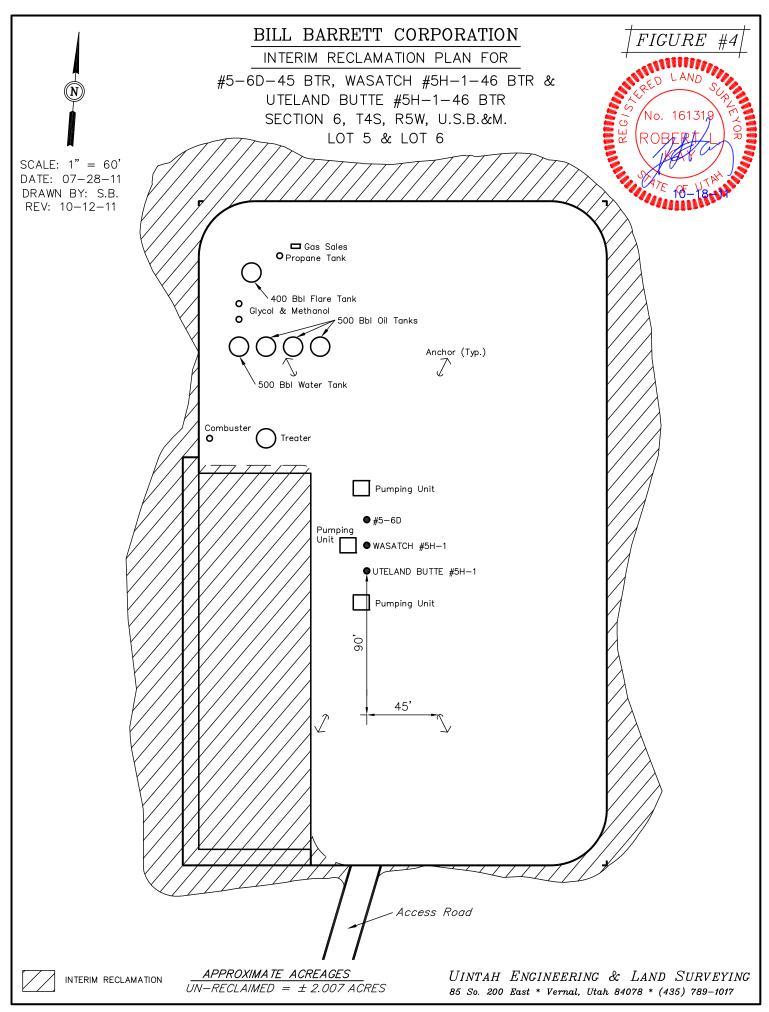
David Watts Landman

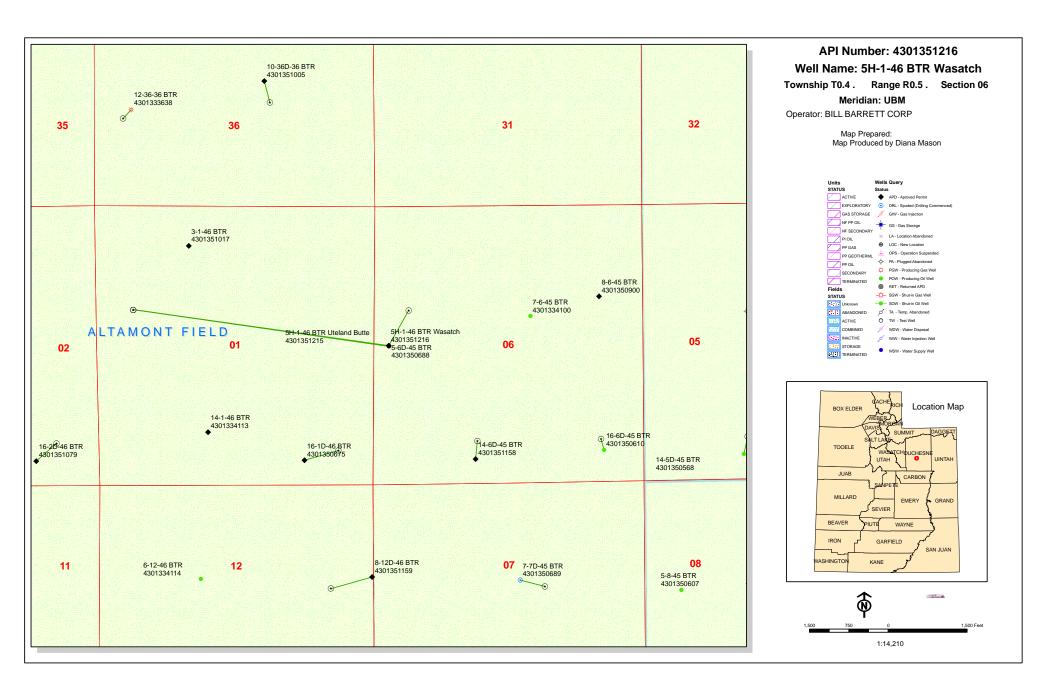
dwatts@billbarrettcorp.com











API Well Number: 43013512160000

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 2/2/2012	API NO. ASSIGNED:	43013512160000

WELL NAME: 5H-1-46 BTR Wasatch

OPERATOR: BILL BARRETT CORP (N2165) **PHONE NUMBER:** 303 312-8172

CONTACT: Venessa Langmacher

PROPOSED LOCATION: SWNW 06 040S 050W Permit Tech Review:

SURFACE: 2650 FNL 0284 FWL Engineering Review:

BOTTOM: 1980 FNL 0700 FWL Geology Review:

COUNTY: DUCHESNE

LATITUDE: 40.16184 LONGITUDE: -110.50102 UTM SURF EASTINGS: 542492.00 NORTHINGS: 4445839.00

FIELD NAME: ALTAMONT LEASE TYPE: 2 - Indian

LEASE NUMBER: 20G0005608 PROPOSED PRODUCING FORMATION(S): WASATCH

SURFACE OWNER: 2 - Indian COALBED METHANE: NO

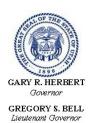
RECEIVED AND/OR REVIEWED: PLAT	LOCATION AND SITING:
▶ Bond: INDIAN - LPM8874725	Unit:
Potash	R649-3-2. General
Oil Shale 190-5	
Oil Shale 190-3	R649-3-3. Exception
Oil Shale 190-13	✓ Drilling Unit
Water Permit: 43-180	Board Cause No: Cause 139-84
RDCC Review:	Effective Date: 12/31/2008
Fee Surface Agreement	Siting: 660' Fr Drl U Bdry & 1320' Fr Other Wells
Intent to Commingle	R649-3-11. Directional Drill

Comments: Presite Completed

Commingling Approved

Stipulations: 4 - Federal Approval - dmason 27 - Other - bhill

API Well No: 43013512160000



State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: 5H-1-46 BTR Wasatch

API Well Number: 43013512160000

Lease Number: 20G0005608

Surface Owner: INDIAN Approval Date: 2/15/2012

Issued to:

BILL BARRETT CORP, 1099 18th Street Ste 2300, Denver, CO 80202

Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 139-84. The expected producing formation or pool is the WASATCH Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-21, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas

API Well No: 43013512160000

website

at http://oilgas.ogm.utah.gov

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
 - Report of Water Encountered (Form 7) due within 30 days after completion
 - Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas

	STATE OF UTAH				FORM 9
	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		3	5.LEASE I 20G000	DESIGNATION AND SERIAL NUMBER: 05608
SUNDR	RY NOTICES AND REPORTS	ON	WELLS	6. IF INDIA	AN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.					CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well		NAME and NUMBER: BTR Wasatch			
2. NAME OF OPERATOR: BILL BARRETT CORP				9. API NU I 430135	MBER: 12160000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 312-8164 Ext	9. FIELD a	and POOL or WILDCAT: ONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2650 FNL 0284 FWL				COUNTY:	
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 06 Township: 04.0S Range: 05.0W Mo	eridian	: U	STATE: UTAH	
11. CHEC	K APPROPRIATE BOXES TO INDICA	ATE N	ATURE OF NOTICE, REPOR	RT, OR 01	THER DATA
TYPE OF SUBMISSION			TYPE OF ACTION		
	ACIDIZE		ALTER CASING		CASING REPAIR
NOTICE OF INTENT Approximate date work will start: 4/26/2012	CHANGE TO PREVIOUS PLANS		CHANGE TUBING		CHANGE WELL NAME
	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS		CONVERT WELL TYPE
SUBSEQUENT REPORT	DEEPEN		RACTURE TREAT		NEW CONSTRUCTION
Date of Work Completion:			PLUG AND ABANDON		PLUG BACK
	OPERATOR CHANGE				
SPUD REPORT	PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE		RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	□ :	SIDETRACK TO REPAIR WELL		TEMPORARY ABANDON
_	TUBING REPAIR	□ \	/ENT OR FLARE		WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	؛ لــا	SI TA STATUS EXTENSION	Ш	APD EXTENSION
	WILDCAT WELL DETERMINATION	1	OTHER	OTHER	Confidential Status
	COMPLETED OPERATIONS. Clearly show quests this well to be held i	-	_	FOR	ccepted by the Utah Division of Gas and Mining RECORD ONLY
NAME (PLEASE PRINT) Venessa Langmacher	PHONE NUM 303 312-8172	BER	TITLE Senior Permit Analyst		
SIGNATURE			DATE		
N/A			4/26/2012		

FORM APPROVED

UNITED STATES DEPARTMENT OF THE INTERIOR FEB 0 3 2012

APPLICATION FOR DEPMIT TO DOLL OR DEENTER

OMB No. 1004-0136 Expires July 31, 2010

Lease Serial No. 20G0005608

AFFLICATION FOR PERIVIT	IO DRILL OR REEN ER	6. If Indian, Allottee or Tril	
1a. Type of Work: ☑ DRILL ☐ REENTER		7. If Unit or CA Agreement	i, Name and No.
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Oth 2. Name of Operator Contact: BILL BARRETT CORPORATION E-Mail: vlangma	er Single Zone Mui VENESSA LANGMACHER cher@billbarrettcorp.com	8. Lease Name and Well No. 5H-1-46 BTR WA' 9. API Well No.	
3a. Address 1099 18TH STREET SUITE 2300 DENVER, CO 80202	3b. Phone No. (include area code) Ph: 303-312-8172 Fx: 303-291-0420	10. Field and Pool, or Explo ALTAMONT	oratory
4. Location of Well (Report location clearly and in accorded At surface Lot 5 2650FNL 284FWL 40 At proposed prod. zone SWNW 1980FNL 700FWL	.161936 N Lat, 110.501011 W Lon		•
 14. Distance in miles and direction from nearest town or post 11.3 MILES SOUTHWEST OF DUCHESNE, UT 15. Distance from proposed location to nearest property or 		12. County or Parish DUCHESNE 17. Spacing Unit dedicated	13. State UT
lease line, ft. (Also to nearest drig. unit line, if any) 700' (BOTTOM HOLE)	52428.45	640.00	to this well
 Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 4523' 	19. Proposed Depth 12356 MD 7580 TVD	20. BLM/BIA Bond No. on WYB000040	file
21. Elevations (Show whether DF, KB, RT, GL, etc. 5941 GL	22. Approximate date work will start 06/01/2012	23. Estimated duration 60 DAYS (D&C)	
	24. Attachments		
The following, completed in accordance with the requirements of	f Onshore Oil and Gas Order No. 1, shall b	e attached to this form:	
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest Syst SUPO shall be filed with the appropriate Forest Service Off 	em Lands, the 1 tem 20 above 5. Operator certi	fication e specific information and/or plans as may	
25. Signature (Electronic Submission)	Name (Printed/Typed) VENESSA LANGMACHER Pr	: 303-312-8172	Date 02/02/2012
Title SENIOR PERMIT ANALYST			<u></u>
Approved by (Signature)	Name (Printed/Typed) Jerry Ke	enczka	Date 1 2012
Assistant Field Manager Lands & Mineral Resources	VERNAL FIELD O	FICE	
	lds legal or equitable title to those rights in DITIONS OF APPROVAL ATTAI	the subject lease which would entitle the a	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, I States any false, fictitious or fraudulent statements or representat	nake it a crime for any person knowingly a ions as to any matter within its jurisdiction	nd willfully to make to any department or a	igency of the United

Additional Operator Remarks (see next page)

Electronic Submission #129970 verified by the BLM Well Information System
For BILL BARRETT CORPORATION, sent to the Vernal
Committed to AFMSS for processing by LESLIE ROBINSON on 02/15/2012 (12LBR0211AE)

NOTICE OF APPROVAL

JUN 2 1 2012

DIV. OF OIL, GAS & MINING

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

171 RR1121149

NU NUS-



UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE

VERNAL FIELD OFFICE VERNAL, UT 84078

(435) 781-4400



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Well No: API No: Bill Barrett Corporation

5H-1-46 BTR WB 43-013-51216 Location:

Lot 5, Sec. 6, T4S, R5W

Lease No: 20G0005608

Agreement:

N/A

OFFICE NUMBER:

(435) 781-4400

OFFICE FAX NUMBER:

(435) 781-3420

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

NOTIFICATION REQUIREMENTS

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <u>blm_ut_vn_opreport@blm.gov</u> .
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 2 Well: 5H-1-46 BTR WB 6/8/2012

SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

Additional Stipulations:

- Production Equipment will be painted Beetle Green to help blend into the surrounding vegetation.
- See Exhibit One of the approved EA U&O-FY11-Q3-053 for additional mitigation measures that
 must be followed for the proposed road and pipeline. There are also site specific COAs of
 concern towards the back of that document that must be adhered to.

General Conditions of Approval:

- A <u>30</u>' foot corridor right-of-way shall be approved. Upon completion of each pipeline in corridor, they shall be identified and filed with the Ute Tribe.
- The Ute Tribe Energy & Minerals Department is to be notified, in writing 48 hours prior to construction of pipelines.
- Construction Notice shall be given to the department on the Ute Tribe workdays, which are Monday through Thursday. The Company understands that they may be responsible for costs incurred by the Ute Tribe after hours.
- The Company shall inform contractors to maintain construction of pipelines within the approved ROW's.
- The Company shall assure the Ute Tribe that "ALL CONTRACTORS, INCLUDING SUB-CONTRACTORS, LEASING CONTRACTORS, AND ETC." have acquired a current and valid Ute Tribal Business License and have "Access Permits" prior to construction, and will have these permits in all vehicles at all times.
- You are hereby notified that working under the "umbrella" of a company does not allow you to be in the field, and can be subject to those fines of the Ute Tribe Severance Tax Ordinance.
- Any deviation of submitted APD's and ROW applications the Companies will notify the Ute Tribe and BIA in writing and will receive written authorization of any such change with appropriate authorization.
- Bill Barrett Corporation will implement a "Safety and Emergency Plan." The Company's safety director will ensure its compliance.
- All Company employees and/or authorized personnel (sub-contractors) in the field will have approved applicable APD's, COA's, and/or ROW permits/authorizations on their person(s) during all phases of construction.
- All vehicular traffic, personnel movement, construction/restoration operations should be confined to the area examined and approved, and to the existing roadways and/or evaluated access routes.
- The personnel from the Ute Tribe Energy & Minerals Department should be notified should

Page 3 of 3 Well: 5H-1-46 BTR WB 6/8/2012

cultural remains from subsurface deposits be exposed or identified during construction. All construction will cease.

 Upon completion of Application for Corridor Right-Way, the company will notify the Ute Tribe Energy & Minerals Department, so that a Tribal Technician can verify Affidavit of Completion.

Page 4 of 4 Well: 5H-1-46 BTR WB 6/8/2012

DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

- A CBL shall be run from intermediate casing depth to TOC.
- Cement for the surface casing will be circulated to the surface.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the
 daily drilling report. Components shall be operated and tested as required by Onshore Oil &
 Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be
 performed by a test pump with a chart recorder and NOT by the rig pumps. Test shall be
 reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water
 is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM
 Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth

Page 5 of 5 Well: 5H-1-46 BTR WB 6/8/2012

(from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
 Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to BLM_UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 6 of 6 Well: 5H-1-46 BTR WB 6/8/2012

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
 notified when it is placed in a producing status. Such notification will be by written
 communication and must be received in this office by not later than the fifth business day
 following the date on which the well is placed on production. The notification shall provide, as a
 minimum, the following informational items:
 - Operator name, address, and telephone number.
 - Well name and number.
 - Well location (¼¼, Sec., Twn, Rng, and P.M.).
 - Date well was placed in a producing status (date of first production for which royalty will be paid).
 - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - o Unit agreement and/or participating area name and number, if applicable.
 - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will
 be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be
 reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major
 Events" will be reported in writing within 15 days. "Minor Events" will be reported on the
 Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if

Page 7 of 7 Well: 5H-1-46 BTR WB 6/8/2012

performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted
 to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs
 first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be
 adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively
 sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
 equipment shall be removed from a well to be placed in a suspended status without prior
 approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30
 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given
 before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office
 Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in
 order that a representative may witness plugging operations. If a well is suspended or
 abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent
 Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual
 plugging of the well bore, showing location of plugs, amount of cement in each, and amount of
 casing left in hole, and the current status of the surface restoration.

CONFIDENTIAL

BLM - Vernal Field Office - Notification Form

Submitted By Venessa Langmach Phone Number Well Name/Number 5H-1-46 BTR WB Weserch Qtr/Qtr SWNW Section 6 Township 4S Lease Serial Number 1420H626296 API Number 4301351216	303-312-8172
<u>Spud Notice</u> – Spud is the initial spudding of the out below a casing string.	well, not drilling
Casing – Please report time casing run starts, no times. Surface Casing Intermediate Casing Production Casing Liner Other	
Date/Time AM BOPE Initial BOPE test at surface casing point	PM RECEIVED
BOPE test at surface casing point BOPE test at intermediate casing point 30 day BOPE test Other	SEP 1 2 2012 DIV. OF OIL, GAS & MINING
Date/Time AM Remarks	<u> </u>

Sundry Number: 30188 API Well Number: 43013512160000

	STATE OF UTAH			FORM 9
	DEPARTMENT OF NATURAL RESOULDIVISION OF OIL, GAS, AND M		;	5.LEASE DESIGNATION AND SERIAL NUMBER: 20G0005608
SUNDR	Y NOTICES AND REPORTS	S ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Uintah
Do not use this form for pro current bottom-hole depth, FOR PERMIT TO DRILL forn	7.UNIT or CA AGREEMENT NAME:			
1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: 5H-1-46 BTR WASATCH			
2. NAME OF OPERATOR: BILL BARRETT CORP	9. API NUMBER: 43013512160000			
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 312-8164 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2650 FNL 0284 FWL				COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SWNW Section:	IIP, RANGE, MERIDIAN: 06 Township: 04.0S Range: 05.0W M	leridian	: U	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDIC	ATE N	ATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ F	RACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	☐ F	PLUG AND ABANDON	PLUG BACK
✓ SPUD REPORT	PRODUCTION START OR RESUME	☐ F	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud: 9/14/2012	REPERFORATE CURRENT FORMATION	□ s	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
3/14/2012	TUBING REPAIR		ENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	□ WATER SHUTOFF	_ 	SI TA STATUS EXTENSION	APD EXTENSION
Report Date.	WILDCAT WELL DETERMINATION		OTHER	OTHER:
			···-	<u>'</u>
	COMPLETED OPERATIONS. Clearly shoud by Triple A Drilling on S	-	_	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY September 28, 2012
NAME (PLEASE PRINT) Venessa Langmacher	PHONE NUN 303 312-8172	MBER	TITLE Senior Permit Analyst	
SIGNATURE N/A			DATE 9/25/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM

Operator:

Bill Barrett Corporation

Operator Account Number: N 2165

Address:

1099 18th Street, Suite 2300

city Denver

state CO zip 80202

Phone Number: (303) 312-8172

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4301350688	5-6D-45 BTR		SWNW	6	48	5W	Duchesne
Action Code	Current Entity Number	New Entity Number	S	pud Da	te		ity Assignment ffective Date
Α	Dean	18726	9	/13/201	2	918	CIDEILE
omments:							-

Spudding Operation was conducted by Triple A Drilling @ 9:00 am.

RHL: SIONW

Weil 2

API Number	Well	Name	QQ	Sec	Twp	Rng	County
4301351216	5H-1-46 BTR Wasatch		SWNW	6	48	5W	Duchesne
Action Code	Current Entity Number	New Entity Number	S	pud Da	te	1	ity Assignment iffective Date
A	hew	18727	9	/14/201	2	91	2712012

Spudding Operation was conducted by Triple A Drilling @ 11:00 am.

BHL: SIRLW SWNW

CONFIDENTIAL

Well 3

API Number	Well	Name	QQ	Sec	Twp	Rng	County
4301351215	5H-1-46 BTR Utelan	d Butte	nusu	6	48	5W	Duchesne
Action Code	Current Entity Number	New Entity Number	S	pud Da	te		ity Assignment iffective Date
A	new	19729	9	/15/201	2	91	2712012
comments: Spuc	dding Operation was co		rilling @ 12	:00 pm.		CUNE	AFUTAL

ACTION CODES:

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- c Re-assign well from one existing entity to another existing entity

GRRY BHL: SI RGW SWDU

- D Re-assign well from one existing entity to a new entity
 E Other (Explain in 'comments' section)

SEP 2 3 2012

Venessa Langmacher	
Name (Please Print)	
Venessa Langmacher	
Signature	
Sr Permit Analyst	9/25/2012
Title	Date

	STATE OF UTAH			FORM 9
[DEPARTMENT OF NATURAL RESO DIVISION OF OIL, GAS, AND		i	5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608
SUNDR	Y NOTICES AND REPORT	rs on	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Uintah
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME:			
1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: 5H-1-46 BTR WASATCH			
2. NAME OF OPERATOR: BILL BARRETT CORP				9. API NUMBER: 43013512160000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 312-8164 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2650 FNL 0284 FWL				COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 06 Township: 04.0S Range: 05.0W	Meridian	: U	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDI	CATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ F	RACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	F	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	☐ F	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR		ENT OR FLARE	WATER DISPOSAL
✓ DRILLING REPORT	WATER SHUTOFF		SI TA STATUS EXTENSION	APD EXTENSION
Report Date: 9/30/2012		□ :	I IA STATUS EXTENSION	
	WILDCAT WELL DETERMINATION		DTHER	OTHER:
l .	completed operations. Clearly sh 2012; no other Septembe activity to report.	er 2012		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 05, 2012
NAME (PLEASE PRINT)	PHONE NU	JMBER	TITLE	
Megan Finnegan	303 299-9949		Permit Analyst	
SIGNATURE N/A			DATE 10/2/2012	

CONFIDENTIAL

BLM - Vernal Field Office - Notification Form

Ope	rator <u>Bill Barrett Corp</u>	Rig Name/#	Nabors M22				
Sub	mitted By <u>Pat Clark</u> Phon	e Number 303-	353-5350				
	Name/Number 5H-1-46 E						
Qtr/Qtr <u>SW/NW</u> Section <u>6</u> Township <u>4S</u> Range 5W_ Lease Serial Number <u>20G0005608</u>							
ADI	Number	<u>05608</u>					
VLI	Number 43-013-51216-00	-X1					
<u>Spu</u> out	<u>d Notice</u> – Spud is the initi below a casing string.	al spudding of tl	ne well, not drilling				
	Date/Time	AM [PM					
Casi time	ng – Please report time caes. Surface Casing Intermediate Casing Production Casing Liner Other	sing run starts,	not cementing				
	Date/Time	AM 🗌 P	М				
BOP	E Initial BOPE test at surfact BOPE test at intermediate 30 day BOPE test Other		RECEIVED NOV 0 6 2812 DIV. OF OIL, GAS & MININ				
	Date/Time <u>11-5-12</u>	<u>13:00</u> AM	PM 🔀				
Rem	arks <u>Times are estimat</u>	ted					

BLM - Vernal Field Office - Notification Form

Operator Bill Barrett Corp Rig Name/#	Nabors M22							
Submitted By Pat Clark Phone Number 303-	353-5350							
Well Name/Number <u>5H-1-46 BTR WA</u>								
Qtr/Qtr SW/NW Section 6 Township 4S Range 5W								
Lease Serial Number <u>20G0005608</u>								
API Number 43-013-51216-00-X1								
Spud Notice – Spud is the initial spudding of the	he well not drilling							
out below a casing string.	ne weny not arming							
Date/Time AM PM								
<u>Casing</u> – Please report time casing run starts,	not cementing							
times.	_							
Surface Casing	RECEIVED							
Intermediate Casing	NOV 0 8 2012							
Production Casing	DIV. OF OIL, GAS & MINING							
Liner	, ======							
Other								
Date/Time $\underline{11-4-12}$ $\underline{10:00}$ AM \boxtimes	PM							
<u>BOPE</u>								
Initial BOPE test at surface casing point								
BOPE test at intermediate casing point								
30 day BOPE test								
Other								
Date/Time <u>11-5-12</u> <u>01:00</u> AM	PM 🗌							
								
Remarks <u>Times are estimated</u>								

Sundry Number: 31841 API Well Number: 43013512160000

	STATE OF UTAH			FORM 9	
I	DEPARTMENT OF NATURAL RESO DIVISION OF OIL, GAS, AND			5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608	
SUNDR	RY NOTICES AND REPOR	TS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Uintah	
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significa reenter plugged wells, or to drill ho n for such proposals.	en existing wells below aterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME:		
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: 5H-1-46 BTR WASATCH	
2. NAME OF OPERATOR: BILL BARRETT CORP			9. API NUMBER: 43013512160000		
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 12-8164 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2650 FNL 0284 FWL				COUNTY: DUCHESNE	
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 06 Township: 04.0S Range: 05.0W	Meridian:	: U	STATE: UTAH	
11. CHECI	K APPROPRIATE BOXES TO IND	ICATE NA	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA	
TYPE OF SUBMISSION			TYPE OF ACTION		
	ACIDIZE		LTER CASING	CASING REPAIR	
NOTICE OF INTENT	CHANGE TO PREVIOUS PLANS	□ c	HANGE TUBING	CHANGE WELL NAME	
Approximate date work will start:	CHANGE WELL STATUS	□ c	OMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE	
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN		RACTURE TREAT	☐ NEW CONSTRUCTION	
Date of Work Completion.					
	OPERATOR CHANGE		LUG AND ABANDON	☐ PLUG BACK	
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	□ R	ECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION	
	REPERFORATE CURRENT FORMATION	∐ s	IDETRACK TO REPAIR WELL	L TEMPORARY ABANDON	
✓ DRILLING REPORT	TUBING REPAIR	∐ v	ENT OR FLARE	WATER DISPOSAL	
Report Date:	WATER SHUTOFF	□ s	I TA STATUS EXTENSION	APD EXTENSION	
10/31/2012	WILDCAT WELL DETERMINATION	□ 。	THER	OTHER:	
	COMPLETED OPERATIONS. Clearly stee 2012 monthly drilling			depths, volumes, etc. Accepted by the	
				Utah Division of	
				Oil, Gas and Mining	
				FOR RECORD ONLY	
				November 08, 2012	
NAME (PLEASE PRINT)	PHONE NU	UMBER	TITLE		
Brady Riley	303 312-8115		Permit Analyst		
SIGNATURE N/A			DATE 11/7/2012		

	STATE OF UTAH		FORM 9
ι	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	3	5.LEASE DESIGNATION AND SERIAL NUMBER: 20G0005608
SUNDR	Y NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Uintah
	posals to drill new wells, significantly deer reenter plugged wells, or to drill horizontal n for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: 5H-1-46 BTR WASATCH
2. NAME OF OPERATOR: BILL BARRETT CORP			9. API NUMBER: 43013512160000
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4. LOCATION OF WELL FOOTAGES AT SURFACE: 2650 FNL 0284 FWL			COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SWNW Section:	IIP, RANGE, MERIDIAN: 06 Township: 04.0S Range: 05.0W Meridiar	n: U	STATE: UTAH
11. CHECK	CAPPROPRIATE BOXES TO INDICATE N	IATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
_	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	water shutoff	SI TA STATUS EXTENSION	APD EXTENSION
12/3/2012	WILDCAT WELL DETERMINATION	OTHER	OTHER:
November 20	COMPLETED OPERATIONS. Clearly show all per 12 monthly drilling activity reports to the complete of the complet		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY December 03, 2012
NAME (PLEASE PRINT) Brady Riley	PHONE NUMBER 303 312-8115	Permit Analyst	
SIGNATURE N/A		DATE 12/3/2012	



API/UWI	0400000		State/Provinc	County	Field Name		Well Status	Total Depth (ftKB)	Primary Job Type
301351	2160000				Black 1	ail Ridge	DRILLING	11	,918.0 Drilling & Completion
Start Time	Dur (hr)	End Time	Code	Category				Com	
21:00	6.00	03:00	1	RIGUP & TEARDOWN		Prepare 8	Skid rig. Rurt.		
3:00	1.00	04:00	14	NIPPLE UP B.O.P		N/U riser,	flow line. Rig on day	work @ 03:00.	
04:00	1.00	05:00	20	DIRECTIONAL WORK		P/U dir to	ols.		
05:00	1.00	06:00	2	DRILL ACTUAL		Drill 80' -	150'.		
5H-1-	46 TW E	TR	11/2/2	012 06:00 - 11/3	3/2012 (16:00			
API/UWI	70 1 11 2		State/Province		Field Name		Well Status	Total Depth (ftKB)	Primary Job Type
	2160000				Black Ta	ail Ridge	DRILLING	11	,918.0 Drilling & Completion
Time Lo Start Time	Dur (hr)	End Time	Code	Cotogon				Com	
06:00	. ,	07:30	2	DRILL ACTUAL		Drill 150'	- 176'.	Com	
07:30		09:00	20	DIRECTIONAL WORK			ols, Scribe toolface.		
09:00		17:30	2	DRILL ACTUAL				rpm 45/85, spp 1300 psi,	dn 300 psi ron 48 fph
17:30		18:00	7	LUBRICATE RIG		Rig Servi		1piii 45/65, spp 1500 psi,	тар 300 psi, тор 40 грп.
18:00		05:30		DRILL ACTUAL		J		rpm 45/95 app 4000	i do 200 poi roo 72 fob
			2					x, rpm 45/85, spp 1300 ps	i, up 300 psi, 10p 73 tpn.
05:30		06:00	1/	LUBRICATE RIG		Rig Servi	ce.		
	46 TW B			012 06:00 - 11/4					
API/UWI 4301351	2160000	8	State/Provinc	ce County	Field Name Black Ta	_e ail Ridge	Well Status DRILLING	Total Depth (ftKB)	Primary Job Type ,918.0 Drilling & Completion
Time Lo					Diagn. 10	an range	2		,5 : 5: 5 2 :
Start Time	Dur (hr)	End Time	Code	Category				Com	
06:00	8.50	14:30	2	DRILL ACTUAL		Drill/Slide fph.	1432' - 2096'. Wob	15k, rpm 55/99, gpm 585,	spp 1300 psi, dp 300 psi, rop 78
14:30	0.50	15:00	7	LUBRICATE RIG		Rig Servi	ce.		
15:00	10.50	01:30	2	DRILL ACTUAL		Drill/Slide 2096' - 2511'. Wob 15k, rpm 55/99, gpm 585, spp 1300 psi, dp 300 psi, rop 40 fph.			
01:30	1.00	02:30	5	COND MUD & CIRC			ole, C&C f/ csg.		
02:30	4.50	07:00	6	TRIPS		TOH. L/D	dir tools.		
5H-1-	46 TW E	TR	11/4/2	012 06:00 - 11/5	5/2012 (06:00			
API/UWI	.0		State/Province		Field Name		Well Status	Total Depth (ftKB)	Primary Job Type
4301351	2160000				Black Ta	ail Ridge	DRILLING	11	,918.0 Drilling & Completion
Time Lo									
Start Time 06:00	Dur (hr)	End Time	Code 12	Category RUN CASING & CEMEN	NT	HSM D/I	I Frank's Westates i	Com	C Csg as follows: Float shoe, 1
00.00	1 4.00	10.00	'2			THOW. N/C	J FIAIINS WESIALES. I	un 9 5/6 , 50#, 5-55, 5 ra	C Csy as follows. Float since, i
				TOTA CACINA & CLIVIET		jt casing,	Float collar, 56 jts cs couplings welded.	g.Tagged @ 2511', set @	2508'. R/D casers.
10:00	2.00	12:00	5	COND MUD & CIRC		jt casing, Bottom 4	Float collar, 56 jts cs		2508'. R/D casers.
12:00	2.50	14:30	12	COND MUD & CIRC RUN CASING & CEMEN		jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned 8 bump plu	Float collar, 56 jts cs couplings welded. ment. R/U HES cemment well as follows: h, 20 bbls H2O. Mix gps H2O. Tail in w/s sh up on plug, displa 30 bbls to surface. R g to 1000 psi. Plug la	enters. Press test lines to 3000 # and pump 169 bbls(300 s 66 bbls(235 sx) cement @ ce w/ 190.6 bbls 8.9 ppg eciprocated pipe during conded @ 14:30.	. Pump 20 bbls H2O, 40 bbls x) lead cement @ 11 ppg, 3.16 : 14.8 ppg, 1.33 yld, 6.31 gps
12:00	2.50	14:30	12	COND MUD & CIRC RUN CASING & CEMEN WAIT ON CEMENT		jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned a bump plu Cement f	Float collar, 56 jts cs couplings welded. ment. R/U HES cemment well as follows: h, 20 bbls H2O. Mix gps H2O. Tail in w/s sh up on plug, displa 30 bbls to surface. R g to 1000 psi. Plug la ell 4' in 1 hr. R/D HES	enters. Press test lines to 3000 # and pump 169 bbls(300 s 66 bbls(235 sx) cement @ ce w/ 190.6 bbls 8.9 ppg eciprocated pipe during conded @ 14:30. S. WOC.	Pump 20 bbls H2O, 40 bbls x) lead cement @ 11 ppg, 3.16 14.8 ppg, 1.33 yld, 6.31 gps drilling mud. Full returns, ementing. Max press 580 psi,
12:00 14:30 18:00	2.50 3.50 3.00	14:30 18:00 21:00	12 13 14	COND MUD & CIRC RUN CASING & CEMEN WAIT ON CEMENT NIPPLE UP B.O.P		jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned a bump plu Cement f. Lift riser,	Float collar, 56 jts cs couplings welded. ment. R/U HES cemment well as follows: h, 20 bbls H2O. Mix gps H2O. Tail in w/s sh up on plug, displa 30 bbls to surface. Rig to 1000 psi. Plug la lell 4' in 1 hr. R/D HES cut csg. Weld on 11"	enters. Press test lines to 3000 # and pump 169 bbls(300 s 66 bbls(235 sx) cement @ ce w/ 190.6 bbls 8.9 ppg eciprocated pipe during conded @ 14:30.	Pump 20 bbls H2O, 40 bbls x) lead cement @ 11 ppg, 3.16 14.8 ppg, 1.33 yld, 6.31 gps drilling mud. Full returns, ementing. Max press 580 psi,
12:00 14:30 18:00	2.50 3.50 3.00	14:30	12	COND MUD & CIRC RUN CASING & CEMEN WAIT ON CEMENT		jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned a bump plu Cement f	Float collar, 56 jts cs couplings welded. ment. R/U HES cemment well as follows: h, 20 bbls H2O. Mix gps H2O. Tail in w/s sh up on plug, displa 30 bbls to surface. Rig to 1000 psi. Plug la lell 4' in 1 hr. R/D HES cut csg. Weld on 11"	enters. Press test lines to 3000 # and pump 169 bbls(300 s 66 bbls(235 sx) cement @ ce w/ 190.6 bbls 8.9 ppg eciprocated pipe during conded @ 14:30. S. WOC.	Pump 20 bbls H2O, 40 bbls x) lead cement @ 11 ppg, 3.16 14.8 ppg, 1.33 yld, 6.31 gps drilling mud. Full returns, ementing. Max press 580 psi,
12:00 14:30 18:00 21:00	2.50 3.50 3.00 2.50	14:30 18:00 21:00	12 13 14	COND MUD & CIRC RUN CASING & CEMEN WAIT ON CEMENT NIPPLE UP B.O.P		jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned a bump plu Cement f. Lift riser, NUBOPE Test Bop.	Float collar, 56 jts cs couplings welded. ment. R/U HES cemment well as follows: h, 20 bbls H2O. Mix gps H2O. Tail in w/s sh up on plug, displa 30 bbls to surface. Rig to 1000 psi. Plug la ell 4' in 1 hr. R/D HES cut csg. Weld on 11" Short test - Test bli	enters. Press test lines to 3000 # and pump 169 bbls(300 s i6 bbls(235 sx) cement @ ce w/ 190.6 bbls 8.9 ppg eciprocated pipe during conded @ 14:30. S. WOC. X 9 5/8" 5K SOW Csg He	Pump 20 bbls H2O, 40 bbls x) lead cement @ 11 ppg, 3.16 to 14.8 ppg, 1.33 yld, 6.31 gps drilling mud. Full returns, ementing. Max press 580 psi, ead.
12:00 14:30 18:00 21:00 23:30	3.50 3.00 2.50 2.50	14:30 18:00 21:00 23:30	12 13 14 14	COND MUD & CIRC RUN CASING & CEMEN WAIT ON CEMENT NIPPLE UP B.O.P		jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned a bump plu Cement f. Lift riser, NUBOPE Test Bop. high, 250	Float collar, 56 jts cs couplings welded. ment. R/U HES cemment well as follows: h, 20 bbls H2O. Mix gps H2O. Tail in w/s sh up on plug, displa 30 bbls to surface. Rig to 1000 psi. Plug la ell 4' in 1 hr. R/D HES cut csg. Weld on 11" Short test - Test bli	enters. Press test lines to 3000 # and pump 169 bbls(300 s 66 bbls(235 sx) cement @ ce w/ 190.6 bbls 8.9 ppg eciprocated pipe during conded @ 14:30. S. WOC. X 9 5/8" 5K SOW Csg He and rams, choke line, man g to 1500 psi f/30 minutes	Pump 20 bbls H2O, 40 bbls x) lead cement @ 11 ppg, 3.16 to 14.8 ppg, 1.33 yld, 6.31 gps drilling mud. Full returns, ementing. Max press 580 psi, ead.
12:00 14:30 18:00 21:00 23:30	2.50 3.50 3.00 2.50 2.50	18:00 21:00 23:30 02:00	13 14 14 15	COND MUD & CIRC RUN CASING & CEMEN WAIT ON CEMENT NIPPLE UP B.O.P NIPPLE UP B.O.P TEST B.O.P		jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned b bump plu Cement f. Lift riser, NUBOPE Test Bop. high, 250 Install we	Float collar, 56 jts cs couplings welded. ment. R/U HES cem ment well as follows: h, 20 bbls H2O. Mix gps H2O. Tail in w/s sh up on plug, displa 30 bbls to surface. Ri g to 1000 psi. Plug la ell 4' in 1 hr. R/D HES cut csg. Weld on 11" Short test - Test bli psi low. Test surf csg.	enters. Press test lines to 3000 # and pump 169 bbls(300 s 66 bbls(235 sx) cement @ ce w/ 190.6 bbls 8.9 ppg eciprocated pipe during conded @ 14:30. S. WOC. X 9 5/8" 5K SOW Csg He and rams, choke line, man g to 1500 psi f/30 minutes	Pump 20 bbls H2O, 40 bbls x) lead cement @ 11 ppg, 3.16 to 14.8 ppg, 1.33 yld, 6.31 gps drilling mud. Full returns, ementing. Max press 580 psi, ead.
14:30 18:00 21:00 23:30 02:00 04:00	2.50 3.50 3.00 2.50 2.50 2.00	14:30 18:00 21:00 23:30 02:00 04:00 06:00	13 14 14 15 20 6	COND MUD & CIRC RUN CASING & CEMEN WAIT ON CEMENT NIPPLE UP B.O.P NIPPLE UP B.O.P TEST B.O.P DIRECTIONAL WORK TRIPS	NT	jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned a bump plu Cement fi Lift riser, NUBOPE Test Bop high, 250 Install we	Float collar, 56 jts cs couplings welded. ment. R/U HES cem ment well as follows: h, 20 bbls H2O. Mix gps H2O. Tail in w/s sh up on plug, displa 30 bbls to surface. Ri g to 1000 psi. Plug la ell 4' in 1 hr. R/D HES cut csg. Weld on 11" Short test - Test bli psi low. Test surf csi ar bushing. P/U and	enters. Press test lines to 3000 # and pump 169 bbls(300 s 66 bbls(235 sx) cement @ ce w/ 190.6 bbls 8.9 ppg eciprocated pipe during conded @ 14:30. S. WOC. X 9 5/8" 5K SOW Csg He and rams, choke line, man g to 1500 psi f/30 minutes	Pump 20 bbls H2O, 40 bbls x) lead cement @ 11 ppg, 3.16 to 14.8 ppg, 1.33 yld, 6.31 gps drilling mud. Full returns, ementing. Max press 580 psi, ead.
12:00 14:30 18:00 21:00 23:30 02:00 04:00 5 H-1 -	3.50 3.00 2.50 2.50 2.00 2.00	14:30 18:00 21:00 23:30 02:00 04:00 06:00 3TR	13 14 14 15 20 6	COND MUD & CIRC RUN CASING & CEMEN WAIT ON CEMENT NIPPLE UP B.O.P NIPPLE UP B.O.P TEST B.O.P DIRECTIONAL WORK TRIPS 012 06:00 - 11/6	NT	jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned a bump plu Cement f. Lift riser, NUBOPE Test Bop, high, 250 Install we Tih. Tag o	Float collar, 56 jts cs couplings welded. ment. R/U HES cem ment well as follows: h, 20 bbls H2O. Mix gps H2O. Tail in w/s sh up on plug, displa 30 bbls to surface. Ri g to 1000 psi. Plug la ell 4' in 1 hr. R/D HES cut csg. Weld on 11" Short test - Test bli psi low. Test surf csi ar bushing. P/U and	enters. Press test lines to 3000 # and pump 169 bbls(300 s 66 bbls(235 sx) cement @ ce w/ 190.6 bbls 8.9 ppg eciprocated pipe during conded @ 14:30. S. WOC. X 9 5/8" 5K SOW Csg Head and rams, choke line, mange to 1500 psi f/30 minutes prient 6" dir tools.	Pump 20 bbls H2O, 40 bbls x) lead cement @ 11 ppg, 3.16 14.8 ppg, 1.33 yld, 6.31 gps drilling mud. Full returns, ementing. Max press 580 psi, ead.
14:30 18:00 21:00 23:30 02:00 04:00 5 H-1 -	3.50 3.00 2.50 2.50 2.00 2.00 2.00	14:30 18:00 21:00 23:30 02:00 04:00 06:00 3TR	13 14 14 15 20 6 11/5/2	COND MUD & CIRC RUN CASING & CEMEN WAIT ON CEMENT NIPPLE UP B.O.P NIPPLE UP B.O.P TEST B.O.P DIRECTIONAL WORK TRIPS 012 06:00 - 11/6	6/2012 0	jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned a bump plu Cement f. Lift riser, NUBOPE Test Bop, high, 250 Install we Tih. Tag o	Float collar, 56 jts cs couplings welded. ment. R/U HES cemment well as follows: h, 20 bbls H2O. Mix gps H2O. Tail in w/s sh up on plug, displa 30 bbls to surface. Rig to 1000 psi. Plug la ell 4' in 1 hr. R/D HES cut csg. Weld on 11" Short test - Test bli psi low. Test surf csg ar bushing. P/U and cmt @ 2451'.	enters. Press test lines to 3000 # and pump 169 bbls(300 s 66 bbls(235 sx) cement @ ce w/ 190.6 bbls 8.9 ppg eciprocated pipe during conded @ 14:30. S. WOC. X 9 5/8" 5K SOW Csg Head and rams, choke line, mange to 1500 psi f/30 minutes prient 6" dir tools.	Pump 20 bbls H2O, 40 bbls x) lead cement @ 11 ppg, 3.16 to 14.8 ppg, 1.33 yld, 6.31 gps drilling mud. Full returns, ementing. Max press 580 psi, ead.
14:30 18:00 21:00 23:30 02:00 04:00 5H-1- API/UWI 4301351 Time Lo	2.50 3.50 3.00 2.50 2.50 2.00 2.00 2.00 2160000	14:30 18:00 21:00 23:30 02:00 04:00 06:00 3TR	13 14 14 15 20 6 11/5/2 State/Province	COND MUD & CIRC RUN CASING & CEMEN WAIT ON CEMENT NIPPLE UP B.O.P NIPPLE UP B.O.P TEST B.O.P DIRECTIONAL WORK TRIPS 012 06:00 - 11/6	6/2012 0	jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned a bump plu Cement fi Lift riser, NUBOPE Test Bop, high, 250 Install we Tih. Tag o	Float collar, 56 jts cs couplings welded. ment. R/U HES cemment well as follows: h, 20 bbls H2O. Mix gps H2O. Tail in w/s sh up on plug, displa 30 bbls to surface. Rig to 1000 psi. Plug la lell 4' in 1 hr. R/D HES cut csg. Weld on 11" Short test - Test bli psi low. Test surf csg ar bushing. P/U and cmt @ 2451'.	Press test lines to 3000 # and pump 169 bbls(300 s 66 bbls(235 sx) cement @ ce w/ 190.6 bbls 8.9 ppg eciprocated pipe during conded @ 14:30. S. WOC. X 9 5/8" 5K SOW Csg Head and rams, choke line, mang to 1500 psi f/30 minutes prient 6" dir tools.	Pump 20 bbls H2O, 40 bbls x) lead cement @ 11 ppg, 3.16 14.8 ppg, 1.33 yld, 6.31 gps drilling mud. Full returns, ementing. Max press 580 psi, ead.
12:00 14:30 18:00 21:00 23:30 02:00 04:00 5H-1- API/UWI 4301351 Time Lo Start Time	2.50 3.50 3.00 2.50 2.50 2.00 2.00 46 TW E 2160000 9 Dur (hr)	14:30 18:00 21:00 23:30 02:00 04:00 06:00 3TR	13 14 14 15 20 6 11/5/2	COND MUD & CIRC RUN CASING & CEMEN WAIT ON CEMENT NIPPLE UP B.O.P NIPPLE UP B.O.P TEST B.O.P DIRECTIONAL WORK TRIPS 012 06:00 - 11/6 County	6/2012 0	jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned a bump plu Cement fi Lift riser, NUBOPE Test Bop high, 250 Install we Tih. Tag of	Float collar, 56 jts cs couplings welded. ment. R/U HES cemment well as follows: h, 20 bbls H2O. Mix gps H2O. Tail in w/s sh up on plug, displa 30 bbls to surface. R g to 1000 psi. Plug la ell 4' in 1 hr. R/D HES cut csg. Weld on 11" Short test - Test bli psi low. Test surf csar bushing. P/U and cmt @ 2451'.	enters. Press test lines to 3000 # and pump 169 bbls(300 s 66 bbls(235 sx) cement @ ce w/ 190.6 bbls 8.9 ppg eciprocated pipe during conded @ 14:30. S. WOC. X 9 5/8" 5K SOW Csg Head and rams, choke line, man g to 1500 psi f/30 minutes brient 6" dir tools.	Pump 20 bbls H2O, 40 bbls x) lead cement @ 11 ppg, 3.16 14.8 ppg, 1.33 yld, 6.31 gps drilling mud. Full returns, ementing. Max press 580 psi, ead.
API/UWI	2.50 3.50 3.00 2.50 2.50 2.00 2.00 2.00 200 2160000 9 Dur (hr) 1.00	14:30 18:00 21:00 23:30 02:00 04:00 06:00 3TR	13 14 14 15 20 6 11/5/2 State/Province	COND MUD & CIRC RUN CASING & CEMEN WAIT ON CEMENT NIPPLE UP B.O.P NIPPLE UP B.O.P TEST B.O.P DIRECTIONAL WORK TRIPS 012 06:00 - 11/6	6/2012 0	jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned a bump plu Cement fi Lift riser, NUBOPE Test Bop high, 250 Install we Tih. Tag of Cement fi Dill cmt,	Float collar, 56 jts cs couplings welded. ment. R/U HES cemment well as follows: h, 20 bbls H2O. Mix gps H2O. Tail in w/s sh up on plug, displa 30 bbls to surface. Rig to 1000 psi. Plug la lell 4' in 1 hr. R/D HES cut csg. Weld on 11" Short test - Test bli psi low. Test surf csg ar bushing. P/U and cmt @ 2451'.	Press test lines to 3000 # and pump 169 bbls(300 s 66 bbls(235 sx) cement @ ce w/ 190.6 bbls 8.9 ppg eciprocated pipe during conded @ 14:30. 3. WOC. X 9 5/8" 5K SOW Csg Head and rams, choke line, mang to 1500 psi f/30 minutes prient 6" dir tools. Total Depth (ftKB) 11 Com hole to 2531'.	Pump 20 bbls H2O, 40 bbls x) lead cement @ 11 ppg, 3.16 14.8 ppg, 1.33 yld, 6.31 gps drilling mud. Full returns, ementing. Max press 580 psi, ead.

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Su	indry N	oumbe	r: 32	2693 API Wel	l Numb	er: 4	13013512160	0000	
B	Bill B	arret	t Co	poration					
Time Lo	g								
Start Time	Dur (hr)	End Time	Code	Category				Com	
07:30		11:30	2	DRILL ACTUAL		Drill 2531			
11:30		15:30	6	TRIPS		TOH. Bo			
15:30		17:30	15	TEST B.O.P	high, 250	psi low.	llve, dart, safety, inside valves, hcr, pipe rams to 5000 psi		
17:30		20:30	6	TRIPS			ar bushing. Tih.		
20:30		02:30	2	DRILL ACTUAL		Drill/Slide	2810' - 3355'. Wob 1	15k, rpm 50/99, spp 2000 psi, dp 250 psi, rop 91 fph.	
02:30	1.00	03:30	21	OPEN			gas out, raise mw f/9		
03:30	2.00	05:30	2	DRILL ACTUAL		Drill/Slide fph.	3355' - 3517'. Wob 1	15k, rpm47/99, gpm 585, spp 2200 psi, dp 250 psi, rop 81	
05:30	0.50	06:00	7	LUBRICATE RIG		Rig Servi	ce.		
5H-1-	46 TW E	BTR 1	11/6/20	012 06:00 - 11/	7/2012 0	6:00			
API/UWI	2160000		tate/Provinc		Field Name Black Ta)	Well Status DRILLING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion	
Time Lo									
Start Time	Dur (hr)	End Time	Code	Category		Daill/Clide	0547! 5000! Wah 0	Com	
06:00	8.00	14:00	2	DRILL ACTUAL		71 fph.	3517 - 5222 VVOD 2	22k, rpm 48/99, gpm 585, spp 2300 psi, dp 250 psi, rop	
5H-1-	46 TW E	BTR 1	11/7/20	012 06:00 - 11/8	8/2012 0	6:00			
	2160000	S	tate/Provinc	e County	Field Name Black Ta		Well Status DRILLING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion	
Time Lo		Leura	Louis	0.1				0	
Start Time 06:00	Dur (hr)	End Time 17:30	Code 2	DRILL ACTUAL		Drill/Slide	5222' - 5697' Wob 2	Com 20k, rpm 48/99, gpm 585, spp 2300 psi, dp 250 psi, rop 42	
00.00			<u> </u>	J. 1.2271010712		fph.	0001111001		
17:30	0.50	18:00	7	LUBRICATE RIG		Rig servi	ce.		
18:00	11.50	05:30	2	DRILL ACTUAL		Drill/Slide 5697' - 6073'. Wob 20k, rpm 48/99, gpm 585, spp 2350 psi, dp 150 psi, rop 33 fph. Inc 5.84*, Az 326.52 @ 6011' - 9.07' high and 4.07' right of plan			
05:30	0.50	06:00	7	LUBRICATE RIG		Rig Servi Bop drill I	ce. ooth tours.		
5H-1-	46 TW E	BTR 1	11/8/2	012 06:00 - 11/9	9/2012 0				
API/UWI	2160000	S	tate/Provinc	e County	Field Name		Well Status	Total Depth (ftKB) Primary Job Type	
Time Lo	2160000				Black Ta	iii Riage	DRILLING	11,918.0 Drilling & Completion	
Start Time	Dur (hr)	End Time	Code	Category				Com	
06:00		17:30	2	DRILL ACTUAL		Drill/Slide	6073' - 6641'. Surve	ey @ 6579 5.58* inc. 322.79* az. MW 9.2#/gal 45 vis.	
17:30	0.50	18:00	7	LUBRICATE RIG		Rig servi	ce, Function test BOF	D	
18:00	10.00	04:00	2	DRILL ACTUAL		Drill/slide 6641-7090'. Survey @ 7020 4.65* inc 270.18* az. MW 9.3#/gal 51 vis			
04:00		05:30	5	COND MUD & CIRC		Circulate clean. Do flow check. Pump dryjob.			
05:30		06:30	6	TRIPS		Begin TC			
	46 TW E		11/9/20	012 06:00 - 11/ ⁻	10/2012				
API/UWI	70 1 11 L		tate/Provinc		Field Name		Well Status	Total Depth (ftKB) Primary Job Type	
	2160000	آ ا			l l	ail Ridge	DRILLING	11,918.0 Drilling & Completion	
Time Lo								·	
Start Time	Dur (hr)	End Time	Code	Category		4500	a man Class at 1	Com	
06:00		07:30	5	COND MUD & CIRC		flow chec	k. No flow. Pump dry	ition. Raise mud wt to 9.4#/gal gas down to 500 units. Do job. onfigure BHA for drilling curve.	
07:30		18:00	6	TRIPS					

5H-1-46 TW BTR 11/10/2012 06:00 - 11/11/2012 06:00 API/UWI Well Status State/Province Field Name Total Depth (ftKB) Primary Job Type 43013512160000 Black Tail Ridge **DRILLING** 11,918.0 Drilling & Completion

Log in from 6800' with Gamma-Ray

Drlg/sliding 7090-7105'. lost returns

Lost app 350 bbls. Pump lcm pill. build volume. Regained returns. Build volume and raise lcm content to 20%.

5.00 23:00

20.00 19:00

1.00 20:00

5.00 01:00

18:00

23:00

19:00

20:00

6

2

TRIPS

DRILL ACTUAL

COND MUD & CIRC

Su	ındry	N	umbe:	r	: 32	2693	API
B	Bill	В	arret	t	Cor	pora	tio
Time Lo	g						
Start Time			End Time		Code		1
06:00	12.	00	18:00	2		DRILL A	CTUA

Time Lo	g					
Start Time	Dur (hr)	End Time	Code	Category	Com	
06:00	12.00	18:00	2		Drill/slide 7107-7397'. 290' in 12 hrs 22.3 fph. Survey @ 7350' MD 7276.41 TVD 27.04* INC 276.34 AZ. mw 9.5#/gal 46 vis.	
18:00	0.50	18:30	7	LUBRICATE RIG	Rig service, function test BOP.	
18:30	11.50	06:00	2	DRILL ACTUAL	survey at 7508 MD, 7405.10 TVD 41.94* inc 275.76 azi. +N/-S 691.76, +E/-W -554.21 app 39' above line. M/W 9.7#/gal 52 vis.	
5H-1-	5H-1-46 TW BTR 11/11/2012 06:00 - 11/12/2012 06:00					

5H-1-	5H-1-46 TW BTR 11/11/2012 06:00 - 11/12/2012 06:00									
API/UWI State/Pr		State/Provinc	е	County Field Name			Well Status	Total Depth (ftKB)	Primary Job Type	
4301351	2160000				Black Tail Ric		Ridge	DRILLING	11,918.0	Drilling & Completion
Time Log										
Start Time	Dur (hr)	End Time	e Code		Category				Com	
06:00		08:00	2		ACTUAL	g r	963.9 +E/ econfigu	ng 7650-7669'. Survey @ 7572 '-W -600.97. MW 9.7+. Canno re BHA. Lost returns.	ot get weight to bit while	e sliding. Prep to TOH and
00 00	7.50	45.00	1-	LOONID	ALID O OIDO		4:	1011 0 11 0	LIONA III I III D	

06:00	2.00	08:00	2	DRILL ACTUAL	Drlg/sliding 7650-7669'. Survey @ 7572' md (tvd 7450.56) 46.8* inc, 269.86 az. +N/-S 963.9 +E/-W -600.97. MW 9.7+. Cannot get weight to bit while sliding. Prep to TOH and reconfigure BHA. Lost returns.
08:00	7.50	15:30	5	COND MUD & CIRC	Mix and pump LCM. Build volume. Spot LCM pill on bottom. Regained circ while spotting pill. TOH to 6924'. Circ bottoms up.
15:30	4.00	19:30	6	TRIPS	TOH to reconfigure BHA.
19:30	3.00	22:30	20	DIRECTIONAL WORK	Reconfigure BHA. P/U new Smith FHI 20 (517x) Dir eq. 30 jts 4.5" 16.6# drillpipe. 42 jts 42# HWDP.
22:30	1.00	23:30	9	CUT OFF DRILL LINE	Slip & cut drlg line
23:30	0.50	00:00	7	LUBRICATE RIG	RIg service. Function test BOP.
00:00	3.50	03:30	6	TRIPS	TIH to 6824'. filling every 15 stds.
03:30	1.00	04:30	5	COND MUD & CIRC	Circulate and cut MW.
EU 1	46 TW/ E	TD	1111	2042 06:00 44/42/204	2.06-00

5H-1-46 TW BTR 11/12/2012 06:00 - 11/13/2012 06:00

API/UWI State/Province County Field Name Well Status Total Depth (ftKB) Primary Job Type 43013512160000 DRILLING 11,918.0 Drilling & Completion

Time Log	g				
Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	0.50	06:30	5	COND MUD & CIRC	Circ and cut MW back to 9.5#
06:30	1.50	08:00	3	REAMING	Wash & ream thru curve.
08:00	17.00	01:00	2	DRILL ACTUAL	Drlg slide 7669-7944' 275 in 17 hrs. Survey @ 7905md (7619.94 tvd) 76.31* inc. 277.17* az Got sticky and having trouble getting wt to bit. Mix lube and EZ drill. Continue to work pipe and slide.
01:00	0.50	01:30	7	LUBRICATE RIG	Rig service, function test BOP
01:30	4.50	06:00	2	DRILL ACTUAL	Drill/slide 7944-8015 Survey @ 7905 76.31* inc 277.17 az +N/-S 710.64 +E/-w -882.22.

MW 9.8#/gal 55 vis.

5H-1-46 TW BTR 11/13/2012 06:00 - 11/14/2012 06:00

API/UWI State/Province County Field Name Well Status Total Depth (ftKB) Primary Job Type 43013512160000 DRILLING 11,918.0 Drilling & Completion

Time Lo	g				
Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	3.00	09:00	2	DRILL ACTUAL	Drill/Slide 8015' - 8052'.
09:00	1.50	10:30	5	COND MUD & CIRC	C&C, sweep hole.
10:30	7.00	17:30	6	TRIPS	Toh. Reamed to 6900'.
17:30	0.50	18:00	20	DIRECTIONAL WORK	L/D Dir tools.
18:00	12.00	06:00	3	REAMING	P/U Bull nose hole opener, 2 reamers, tih, Reaming as needed(F/7100' to TD).

5H-1-46 TW BTR 11/14/2012 06:00 - 11/15/2012 06:00

API/UWI State/Province County Field Name Well Status Total Depth (ftKB) Primary Job Type 43013512160000 DRILLING Time Log

Tille Lo	y				
Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	2.00	08:00	3	REAMING	Ream last 100' of hole.
08:00	1.50	09:30	5	COND MUD & CIRC	C&C, sweep hole.
09:30	1.50	11:00	6	TRIPS	Pump 12 stds out of hole to top of curve. Pump slug, blow down kelly.
11:00	2.00	13:00	6	TRIPS	Lddp. Pragma broke.
13:00	6.50	19:30	8	REPAIR RIG	Tripped into shoe while repairing pragma.
19:30	0.50	20:00	7	LUBRICATE RIG	Rig Service.
20:00	4.50	00:30	8	REPAIR RIG	Repair pragma.
00:30	1.00	01:30	8	REPAIR RIG	Tih(caused by downtime).

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B	Bill	Barrett	Corporation
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Time Lo		I = /=-	1		_								
Start Time 01:30	, ,	End Time	Code 6	TRIPS	Cate	gory		Lddn Du	lled reamer into ro	ot rubbar Dul	Com	nnular	
02:30		06:00	8	_	REPAIR RIG				nd replace damag				
	<u> </u>					4 4 14	C/204	<u> </u>	<u> </u>	- Coddoca by 1	ranning into rabb	01.	
API/UWI	-46 TW E				06:00	• 11/1					Total Danth (MICD)	Dimen, Joh Time	
	12160000	ľ	State/Provinc	е	County		Field Name Black Ta		Well Status DRILLING		Total Depth (ftKB)	Primary Job Type ,918.0 Drilling & Completion	
Time Lo		Į.			ı		1 - 1 - 1 - 1					,	
Start Time	Dur (hr)	End Time			Cate	gory					Com		
06:00		10:00	8	REPAII					w line and dresse				
10:00		11:00	12		ASING & C	EMENI		Casers.		ŭ		make 2nd reamer trip, R/D	
11:00	19.00	06:00	8	REPAII	R RIG			replacem reamer ru	ent reamer on the	e way). Rack	& tally 4" DP & re	reamer, couldn't(already had eamer assbly, tih to make 2nd nt reaming charged to Nabors.	
	-46 TW E				06:00 ·	· 11/1							
API/UWI	12160000	:	State/Provinc	е	County		Field Name Black Ta		Well Status		Total Depth (ftKB)	Primary Job Type ,918.0 Drilling & Completion	
Fime Lo							DIACK 18	all Ridge	DRILLING		11,	,918.0 Drilling & Completion	
Start Time		End Time	Code		Cate	gory					Com		
06:00	2.00	08:00	8	REPAII	R RIG			Finish rea	aming to 8052'. Do	ouble reamed	last 150'. Hole s	sticky.	
08:00	2.00	10:00	8	REPAII	RIG			Sweep ho	ole twice, C&C f/c	sg.			
10:00	8.00	18:00	8	REPAII	R RIG			Pump pip	e out of curve to	6800', pump :	slug, toh.		
18:00	12.00	06:00	12	RUN C	ASING & C	EMENT		Pull wear report.	bushing. HSM. R	R/U Frank's to	run 7", 26#, P-1	10, Lt&c csg. Details on next	
	46 TW E				06:00	· 11/1							
PI/UWI 1301351	12160000	,	State/Provinc	е	County		Field Name Black Ta		Well Status DRILLING		Total Depth (ftKB)	Primary Job Type ,918.0 Drilling & Completion	
Time Lo							Diagn. 10	an range	2			je rete Ziming & Completion	
Start Time	. ,	End Time			Cate						Com		
06:00	12.00		12		ASING & C			csg. Land	led @ 7927'(125'	short of td). F	R/D casers.	e, 2 jts csg, float collar, 184 jts	
18:00	5.00	23:00	12	RUNC				HSM. R/U Halliburton cementers. Cement well as follows: Press test to 5000 psi. Pump 40 bbls superflush @ 10 ppg, 10 bbls H2O, mix and pump 225 bbls(545 sx) lead cmt @ 11 ppg, 2.32 yld, 10.61 gps H2O. mix and pump 87 bbls(345 sx) tail cmt @ 13.5 ppg, 1.42 yld, 6.65 gps H2O. Drop plug, wash up on plug. Pump 304 bbls mud @ 9.8 ppg. Max press 2200 psi(pressured up a couple times), final press 1400 psi. No returns throughout job. Bump plug to 2000 psi, floats held, bled back 2 bbls. R/D Halliburton.					
23:00	4.00	03:00	14	NIPPLE	UP B.O.P)		Break bo	ttom flange, lift sta	ack. Set slips	on 7" csg, cut of	ff, set weldment.	
03:00	2.00	05:00	14	NIPPLE	UP B.O.F)		NUBOP.		· ·			
05:00	1.00	06:00	15	TEST E	3.O.P			Test Blinds to 5000 psi/high, 250 psi/low. Test csg to 1500 psi for 30 minutes.					
5H-1-	46 TW E	RTR	11/18/	2012	06:00 -	. 11/1	9/201	2 06:00)		-		
API/UWI			State/Provinc		County	, -	Field Name		Well Status		Total Depth (ftKB)	Primary Job Type	
	12160000				·		Black Ta	ail Ridge	DRILLING		11,	,918.0 Drilling & Completion	
Time Lo													
Start Time 06:00		End Time	Code 7	LUBRIG	Cate CATE RIG	gory		Ria Servi	ce - X/O I-Bop.		Com		
07:00		13:00	20		TIONAL W	OPK			Tally Dir tools, P.	VII toole mak	e un hit		
13:00		17:30	6	TRIPS	IIOINAL W	OININ .			rally Dir tools, P. jed cmt @ 7775'.	, o tools, illak	o up vit.		
17:30		06:00	5		MUD & CIF	2C		"		for 20/2 Kal M	ud clabbarad un	, trying to break it back so we	
								can pump	it and drill.	IOI 2% KCI. IVI	uu ciabbereu up	, trying to break it back so we	
	-46 TW E					11/2							
api/uwi 1301351	12160000		State/Provinc	е	County		Field Name Black Ta		Well Status DRILLING		Total Depth (ftKB)	,918.0 Primary Job Type ,918.0 Drilling & Completion	
		End Time	Code		Cate	norv.					Com		
		07:00	5	COND				Finish bu	ilding mud for hor	rizontal sectio			
Start Time	1.00				MUD&CIL			Finish building mud for horizontal section.					
Time Lo Start Time 06:00 07:00			21		MUD & CIF			Drill cmt & flt equip. Clean out rathole to 7959'. Bit plugged.					
Start Time	6.50	13:30	21	OPEN TRIPS	MUD & CIF			Drill cmt &		out rathole to	7959'. Bit plugg	ed.	

B	Bill	Barrett	Corporation
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Time Lo		Erd T.	1 0.1								
Start Time 20:00		End Time 01:00	e Code	TRIPS	Tih. Start washing to bottom @ 7915'.						
01:00		06:00	21	OPEN		rathole to 8052'.	9 7010.				
	-46 TW E			/2012 06:00 - 11	/21/201						
PI/UWI	10 111 2		State/Provin		Field Nam		Well Status	Total	Depth (ftKB) Primary Job Type		
	12160000				Black T	ail Ridge	DRILLING		11,918.0 Drilling & Completion		
ime Lo		End Time	e Code	Catagony					Com		
06:00		06:30	20	DIRECTIONAL WORK		Trouble sl	hoot tools, had bad	connection.	Com		
06:30	1	17:00	2	DRILL ACTUAL					0/72, spp 2500 psi, dp 200 psi, rop 21 fpł		
00.00	10.00	17.00		BRIEERROTONE			75.74 az @ 8203'.	10 20K, 1PM 7	5,72, opp 2000 poi, ap 200 poi, top 21 tp.		
17:00	0.50	17:30	7	LUBRICATE RIG		Rig Service	ce.				
17:30	2.50	20:00	2	DRILL ACTUAL			8276' - 8339'. Wob 73.87 az @ 8330'.	10-25k, rpm 7	0/72, spp 2500 psi, dp 200 psi, rop 25 fp		
20:00	2.00	22:00	20	DIRECTIONAL WORK			Mwd computer.				
22:00		00:30	2	DRILL ACTUAL		94.80*, 27	73.87 az @ 8361'.		70/72, spp 2500 psi, dp 200 psi, rop 25 fp		
00:30		01:30	7	LUBRICATE RIG		_	ce. Work on top drive				
01:30	4.50	06:00	2	DRILL ACTUAL	DRILL ACTUAL			10-25k, rpm 7	70/72, spp 2600 psi, dp 280 psi, rop 29 fp		
	46 TW E	BTR		/2012 06:00 - 11				17			
^{API/UWI} 4301351 Time Lo	12160000		State/Provin	County	Field Nam Black T	ail Ridge	Well Status DRILLING	l otal	Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion		
Start Time		End Time	e Code	Category					Com		
06:00	9.00		2	DRILL ACTUAL		Drill/Slide	8521' - 8717'. 90.27	7*, 268.02 az,	1707.33 vs @ 8645'md/7594.66' tvd.		
15:00	0.50	15:30	7	LUBRICATE RIG		Rig Service	ce.				
15:30	2.50	18:00	20	DIRECTIONAL WORK							
18:00	2.00	20:00	6	TRIPS			g MWD computer. hoe to work on rig(b	rake sensors)			
20:00	7.50	03:30	8	REPAIR RIG					esistor/chopper failure. Tih.		
03:30	1.00	04:30	20	DIRECTIONAL WORK			noot connection to do				
04:30		06:00	2	DRILL ACTUAL			8717' - 8749'.	3			
5H-1-	46 TW E	RTR	11/22/	/2012 06:00 - 11	/23/201	2 06:00)				
API/UWI			State/Provin		Field Nam	е	Well Status	Total	Depth (ftKB) Primary Job Type		
	12160000				Black T	ail Ridge	DRILLING		11,918.0 Drilling & Completion		
Time Lo Start Time		End Time	e Code	Category					Com		
06:00		14:00	2	DRILL ACTUAL		Drill/Slide	8749' - 8939'. 92.18	3*, 267.06 az,	@ 8867'md/7591.57 tvd.		
14:00		15:00	7	LUBRICATE RIG			ce. Adjust brake resi				
15:00		16:30	21	OPEN		Standpipe and diff pressure too high. Rotate & reciprocate to free. Actuated I-Bop, cleared problem up.					
16:30	13.50	06:00	2	DRILL ACTUAL	DRILL ACTUAL			Drill/Slide 8939' - 9318'. 92.86*, 269.72 az, @ 9214' md/7568' tvd29' high, 5' rt of plan.			
	-46 TW E	BTR		/2012 06:00 - 11				IT.	Doub (WKD)		
^{API/UWI} 4301351 Time Lo	12160000		State/Provin	County	Field Nam Black T	ail Ridge	Well Status DRILLING	lotai	Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion		
Start Time		End Time	e Code	Category					Com		
06:00	9.50	15:30	2	DRILL ACTUAL			9318' - 9507'. Havir d sweeps.	ng trouble gett	ing weight to bit - increased lube, running		
15:30		16:00	7	LUBRICATE RIG		Rig Service	ce.				
	2.00	18:00	2	DRILL ACTUAL	Drill/Slide 9507' - 9539'. 93.83*, 272.46 az @ 9467'/7553.75'. 3.29' high, 19.29' right of plan.						
						<u> </u>					
16:00	1.00	19:00	5	COND MUD & CIRC		Sweep ho	ole, C&C f/trip.				
16:00 18:00 19:00		19:00 21:30	5	COND MUD & CIRC		Sweep ho	•				



5H-1-46	TW E	BTR	11/24/	2012 0	6:00 -	11/25/2012	2 06:00)		
API/UWI			State/Province		ounty	Field Name)	Well Status		Total Depth (ftKB) Primary Job Type
4301351216 Time Log	80000					Black Ta	ail Ridge	DRILLING		11,918.0 Drilling & Completion
<u>-</u>	Dur (hr)	End Tim	e Code		Catego	ory				Com
06:00	3.00	09:00	20	DIRECTION	OW JANC		P/U new	mm, bit, dir tool	s. Orient tools.	
09:00	2.00	11:00	6	TRIPS			Tih.			
11:00	1.00	12:00	21	OPEN			Cut and s	lip drilling line.		
12:00	3.50	15:30	6	TRIPS			Finish tih	Circ to bottom	f/shoe.	
15:30	12.50	04:00	2	DRILL AC	TUAL		Drill/Slide	9539' - 9886'. I	ncreased lube	to 4%.
04:00	0.50	04:30	7	LUBRICA	TE RIG		Rig Servi	ce.		
04:30	1.50	06:00	2	DRILL AC	CTUAL			9886' - 9917'. 9 D @ 3500' VS. 3		az @ 9782'/7535.36', 2830 VS. Target # 5 - right of plan.
5H-1-46	TW E	BTR	11/25/	2012 0	6:00 -	11/26/2012	2 06:00)		
API/UWI 4301351216	20000		State/Province	ce C	ounty	Field Name Black Ta		Well Status DRILLING		Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
Time Log	0000					Black 1a	all Ridge	DRILLING		11,918.0 Drilling & Completion
<u> </u>	Dur (hr)	End Tim	e Code		Catego	ory				Com
06:00	9.00	15:00	2	DRILL AC	CTUAL	•				ng every connection. Not able to slide - , taking excessive weight.
15:00	1.50	16:30	5	COND M	UD & CIRO		Stand ba		n and backrea	m hole. Send 40 vis sweeps followed by 56 vis
16:30	0.50	17:00	7	LUBRICA	TE RIG		Rig Servi			
17:00		21:00	2	DRILL AC			_	10183' - 10219)'. Rig brakes fa	ailed.
21:00	9.00	06:00	8	REPAIR I	RIG		Work to get brakes to reset. Able to circ and rotate, but can't pick up off bottom. Ran low then high vis sweep, cleared sweep and kicked pump in and rotated twice an hour while waiting on electrician(not here at report time). 94.7*, 266.67 az, 3140.21' vs @ 10098'/7513.14' - 2.4' low, 2.38' right of plan			
5H-1-46	TW E	BTR				11/27/2012				
^{API/UWI} 4301351216	0000		State/Province	ce C	ounty	Field Name Black Ta		Well Status DRILLING		Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
Time Log	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					plack is	an range	2111221113		,0.1010 2
	Dur (hr)	End Tim	e Code		Catego	ory				Com
06:00		09:30	8	REPAIR I				lectrician. Repa	ir brake electri	c.
09:30		10:00	3	REAMING				e, pump sweep.		
10:00		15:00	2	DRILL AC				10219' - 10359)'.	
15:00		15:30	7	LUBRICA			Rig Servi			
15:30		05:00	2	DRILL AC				10359' - 10644	l'.	
05:00		05:30	7	LUBRICA			Rig Servi			
05:30	0.50	06:00	2	DRILL AC	CTUAL		6.98' left BOP drill	of plan. both tours.		67 az, 3572.9 vs @ 10540'/7481.17'81' high. d higher kcl(4%).
5H-1-46	TW E	BTR	11/27/	2012 0	6:00 -	11/28/2012	2 06:00			
API/UWI 4301351216	30000		State/Province	ce C	ounty	Field Name Black Ta		Well Status DRILLING		Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
Time Log	,,,,,,,,,					Diack To	an raiuge	DIVILLING		11,510.0 Driving & Completion
	Dur (hr)	End Tim	e Code		Catego	ory				Com
06:00		16:00	2	DRILL AC			Drill/Slide	10660' - 10927		
16:00	0.50	16:30	7	LUBRICA	TE RIG		Rig Servi	ce.		
16:30	13.00	05:30	2	DRILL AC	TUAL		Drill/Slide 5.58' left		6'. 92.28*, 267.	72 az, 4162.96' vs @ 11140'/7455.23' - 4.9' low,
05:30	0.50	06:00	7	I I			Rig Service. BOP drill both tours.			
5H-1-46	TW E	BTR	11/28/	2012 0	6:00 -	11/29/2012				
API/UWI	20000		State/Province	ce C	ounty	Field Name		Well Status		Total Depth (ftKB) Primary Job Type
4301351216	00000					Black Ta	all Kidge	DRILLING		11,918.0 Drilling & Completion
Time Log Start Time	Dur (hr)	End Tim	e Code		Catego	nrv				Com
06:00		07:00	2	DRILL AC		n y	Slide 113	06' - 11314'. Ta	king too much	weight and torque to get to bottom.
07:00		10:00	3	REAMING						is then high vis sweeps.
	2.00	1 . 5.00	<u> -</u>	1	-		1		, v	



Time Lo	Time Log										
Start Time	Dur (hr)	End Time	Code	Category	Com						
10:00	11.50	21:30	2	DRILL ACTUAL	Drill/Slide 11314' - 11496'.						
21:30	0.50	22:00	7	LUBRICATE RIG	Rig Service.						
22:00	8.00	06:00	2		Drill/Slide 11496' - 11653'. 94.97*, 268.65 az, 4533.81' vs @ 11518'/7435' - 6.98' low, 13.31' left of plan						

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CONFIDENTIAL

BLM - Vernal Field Office - Notification Form

-	rator <u>Bill Barrett Corp</u> Rig Name/# <u>Nabors</u> nitted By <u>Lawrence Lorenzen</u> Phone Number <u>303</u>	
Qtr/0 Leas	Name/Number <u>5H-1-46 BTR WA</u> Qtr <u>SW/NW</u> Section <u>6</u> Township <u>4S</u> Range se Serial Number <u>20G0005608</u> Number 43-013-51216-00-X1	5W
•	d Notice — Spud is the initial spudding of the well, roclow a casing string.	not drilling
	Date/Time AM D PM D	
Casin time	Surface Casing Intermediate Casing Production Casing	RECEIVED NOV 2 3 2012 OF OIL GAS & MINING
	Date/Time <u>11-30-12</u> <u>22:00</u> AM ☐ PM ⊠	
BOP	E Initial BOPE test at surface casing point BOPE test at intermediate casing point 30 day BOPE test Other	
	Date/Time AM Description PM Description	
Rem	arks <u>Times</u>	

	STATE OF UTAH DEPARTMENT OF NATURAL RESOL			FORM 9
ι	5.LEASE DESIGNATION AND SERIAL NUMBER: 20G0005608			
SUNDR	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Uintah		
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significan reenter plugged wells, or to drill hor n for such proposals.	tly deep izontal l	en existing wells below aterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: 5H-1-46 BTR WASATCH
2. NAME OF OPERATOR: BILL BARRETT CORP				9. API NUMBER: 43013512160000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 312-8164 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2650 FNL 0284 FWL				COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 06 Township: 04.0S Range: 05.0W I	Meridian	: U	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDIC	CATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		LITER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		HANGE TUBING	CHANGE WELL NAME
Approximate date work will start:	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	F	RACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE		LUG AND ABANDON	PLUG BACK
	PRODUCTION START OR RESUME		ECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:				TEMPORARY ABANDON
	REPERFORATE CURRENT FORMATION		IDETRACK TO REPAIR WELL	
✓ DRILLING REPORT	L TUBING REPAIR		ENT OR FLARE	☐ WATER DISPOSAL ☐
Report Date: 1/2/2013	☐ WATER SHUTOFF	∟ s	I TA STATUS EXTENSION	APD EXTENSION
1/2/2010	WILDCAT WELL DETERMINATION		THER	OTHER:
December 20	COMPLETED OPERATIONS. Clearly shi	y repo	ort is attached.	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 03, 2013
NAME (PLEASE PRINT) Brady Riley	PHONE NU 303 312-8115	MBER	TITLE Permit Analyst	
SIGNATURE N/A			DATE 1/2/2013	



API/UWI		5	State/Province	ce Co	unty	Field Name		Well Status	Total Depth (ftKB) Primary Job Type
13-013-5						Black Tail	Ridge	DRILLING	11,918.0 Drilling & Completion
ime Lo		I = . =	1	,	-				
Start Time	Dur (hr)	End Time		TD100	Category	_			Com
06:00	8.50	14:30	6	TRIPS		w	ouldn't (go thru. L/D remaining	
14:30	8.00	22:30	12	RUN CAS	ING & CEMENT	2	jt shoe	track, float collar, land	. HSM Pickup 4 1/2" 11.6# P110 liner, Make up float sh ding collar, 1 jt, RSI sleeve. Then 112 jts. Fill and check skup Versa-flex liner hanger and rig down csg crew.
22:30	7.50	06:00	12	RUN CAS	ING & CEMENT			oipe etc from derrick f ad picking up pup jts a	illing and breaking circ every 10 stds. End of Liner @ at report time.
	46 TW E				00 - 12/3/		:00		
491/UWI 43-013-5		8	State/Provinc	ce Co	unty	Field Name Black Tail	Ridge	Well Status DRILLING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
Time Lo									
Start Time 06:00	Dur (hr)	End Time 20:00	Code 12		Category ING & CEMENT				Com ttom. Bottom of liner assembly @ 11921'. Top of PBTR
						le 1. w d d d 8.	ead cmt 4.3 ppg. yeb & ald isplacen isc in lin 000#. In nd circu Circulate	@14.3 ppg foamed to Wash pump & lines. decide for liner followenent Did not bump pluer hanger. Allow 45 reflate packer. Do 80K late cmt from liner top 7" with water with cla	
20:00	7.00	03:00	13	WAIT ON	CEMENT			II in and monitor pres and check for flow. N	sure for 4 hrs. Pressure 150# due to heat expansion. lo flow.
03:00	3.00	06:00	6	TRIPS		L	DDP.		
5H-1-	46 TW E	BTR	12/3/2	012 06:	00 - 12/4/	2012 06	:00		
API/UWI 43-013-5	-		State/Province		unty	Field Name Black Tail		Well Status DRILLING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
Γime Lo	<u> </u>								
Start Time	Dur (hr)	End Time			Category				Com
06:00	6.00	12:00	6	TRIPS				-	unt of fluid. L/D liner running tool.
12:00	5.00	17:00	14	NIPPLE U	P B.O.P		I/D BOP eleased		shing and install hole cover. Prep rig to move. Rig

www.peloton.com Page 1/1 Report Printed: 1/2/2013

	STATE OF UTAH		FORM 9
1	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ		5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608
SUNDR	Y NOTICES AND REPORTS O	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Uintah
Do not use this form for pro current bottom-hole depth, FOR PERMIT TO DRILL form	posals to drill new wells, significantly de reenter plugged wells, or to drill horizonta n for such proposals.	epen existing wells below at laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: 5H-1-46 BTR WASATCH
2. NAME OF OPERATOR: BILL BARRETT CORP			9. API NUMBER: 43013512160000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300		HONE NUMBER: 3 312-8164 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2650 FNL 0284 FWL			COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SWNW Section:	HP, RANGE, MERIDIAN: 06 Township: 04.0S Range: 05.0W Meridi	an: U	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
7	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
2/7/2013	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date:	■ WILDCAT WELL DETERMINATION	OTHER	OTHER: Confidential Status
12 DESCRIPE PROPOSED OR		nortinant dataila inaludina dataa	·
	COMPLETED OPERATIONS. Clearly show all ests to hold this well in confidence.		Accepted by the Utah Division of Oil, Gas and Mining
			FOR RECORD ONLY
			February 11, 2013
NAME (PLEASE PRINT)	PHONE NUMBER	R TITLE	
Venessa Langmacher	303 312-8172	Senior Permit Analyst	
SIGNATURE N/A		DATE 2/7/2013	
I .		1	

RECEIVED: Feb. 07, 2013

	STATE OF UTAH			FORM 9
I	DEPARTMENT OF NATURAL RESOL DIVISION OF OIL, GAS, AND I			5.LEASE DESIGNATION AND SERIAL NUMBER: 20G0005608
SUNDR	Y NOTICES AND REPORT	TS ON V	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Uintah
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significan reenter plugged wells, or to drill hon n for such proposals.	ntly deepe orizontal la	en existing wells below sterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: 5H-1-46 BTR WASATCH
2. NAME OF OPERATOR: BILL BARRETT CORP				9. API NUMBER: 43013512160000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 12-8164 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2650 FNL 0284 FWL				COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 06 Township: 04.0S Range: 05.0W	Meridian:	U	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDI	ICATE NA	TURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE	☐ AL	TER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	Сн	HANGE TUBING	CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS	☐ cc	DMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ FR	ACTURE TREAT	☐ NEW CONSTRUCTION
·	OPERATOR CHANGE	PL	.UG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME		ECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		DETRACK TO REPAIR WELL	TEMPORARY ABANDON
✓ DRILLING REPORT	L TUBING REPAIR		NT OR FLARE	☐ WATER DISPOSAL ☐
Report Date: 2/28/2013	☐ WATER SHUTOFF ☐	∟ sı	TA STATUS EXTENSION	APD EXTENSION
_,,	WILDCAT WELL DETERMINATION	∐ от	THER	OTHER:
	COMPLETED OPERATIONS. Clearly sh			Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 05, 2013
NAME (PLEASE PRINT)	PHONE NU	-	TITLE	
Brady Riley	303 312-8115		Permit Analyst	
SIGNATURE N/A			DATE 3/5/2013	



5H-1	-46 TW E	BTR	2/1/20 ⁻	13 06	:00 -	2/2/20	13 06:	00			
API/UWI	F4040		State/Provinc	е	County		Field Name		Well Status		Total Depth (ftKB) Primary Job Type
43-013-							DIACK 18	ail Ridge	COMPLETION		11,918.0 Drilling & Completion
Start Time		End Time	Code		С	ategory					Com
06:00	24.00	06:00	IWHD	Install V	Wellhead	I			IECK PRESSURES. NI RE TEST VOID. GOOI		T CAP. INSTALL 7" 10K TBG HEAD. IIGHT CAP.
5H-1-	46 TW E	BTR	2/2/20	13 06	:00 -	2/3/20	13 06:	00			
API/UWI			State/Provinc	e	County		Field Name		Well Status	T	Total Depth (ftKB) Primary Job Type
43-013-							Black Ta	ail Ridge	COMPLETION		11,918.0 Drilling & Completion
Start Time		End Time	Code		С	ategory					Com
06:00	24.00	06:00	LOGG	Logging	J						NER TOP AT 7007'. START STACKING OUT /ER AS START POOH. RD SLB AND MOVE
	-46 TW E					- 2/14/					
API/UWI 43-013-	51216		State/Provinc	е	County		Field Name Black Ta		Well Status COMPLETION		Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
Time Lo		l l					Didok 10	an raidge	TOOM! LETION	<u> </u>	11,010.0 Diming a completion
Start Time	Dur (hr)	End Time				ategory					Com
06:00		07:00	CTRL	Crew T				CREW T			
07:00	1	08:00	RMOV	Rig Mo				_	IG FROM 13H-33-46 T		
08:00	1	10:30	GOP		al Operat	ions			RIG. WAIT ON DEADI	MEN TO	D BE SET.
10:30	1.00	11:30	SRIG	Rig Up/				RUSU.			
11:30	3.00	14:30	ВОРІ	Install E	3OP's						DL, BOP. MUD CROSS, ANNULAR, STRIPPING K AND PIPE RACKS. MOVE IN TBG.
14:30	4.00	18:30	RUTB	Run Tu	bing			MU 6-1/8 5667'. SE		2.31 XN.	. RIH AS MEAS AND PU 176-JTS TBG. EOT A
18:30	11.50	06:00	LOCL	Lock W	ellhead	& Secure		CREW T	RAVEL. WELL SHUT I	N AND	SECURE.
5H-1-	-46 TW E	BTR	2/14/2	013 0	6:00	- 2/15/	2013 0	6:00			
API/UWI			State/Provinc		County		Field Name)	Well Status	I	Total Depth (ftKB) Primary Job Type
43-013-							Black Ta	ail Ridge	COMPLETION		11,918.0 Drilling & Completion
Time Lo		End Time	e Code			ategory					Com
06:00		07:00	CTRL	Crew T		alegory		CREW T	RAVEL.		Con
07:00		08:00	RUTB	Run Tu				_		CONT R	RIH AS PU 2-7/8" TBG. TAG TOP OF LINER AT
08:00		10:30	СТИ	Clean C				6998' W/	4' UP #220.		AN WITH 250 BBLS. HAD HEAVY THICK GRAY
10:30		12:30	PULT	Pull Tul				SLUDGE	IN RETURNS. // 220-JTS 2-7/8" TBG.		
12:30	1	15:00		Run Tu							о ыт. ND 1.87" XN NIPPLE, RIH AS PU 19-JTS 2-3/8
12.30	2.30	13.00	KOIB	Kuii Tu	bing			TBG, X-C	OVER AND RIH W/ 200)-JTS 2-	7/8" TBG. WENT THRU 4-1/2" LT AT 6998' 7614' WITH BIT. (49* INC)
15:00	1.00	16:00	CTU	Clean C	Out			REV CIR	C WITH 100 BBLS. HA	AD SOM	IE GRAY SLUDGE THEN CAME CLEAN.
16:00	2.00	18:00	PULT	Pull Tul	bing			POOH W	// 219-JTS 2-7/8" TBG	AND 20	-JTS 2-3/8". LD 3-7/8" BIT.
5H-1-	-46 TW E	BTR	2/15/2	013 0	6:00	- 2/16/	/2013 0	6:00			
API/UWI 43-013-	F1216		State/Provinc	е	County		Field Name		Well Status	T	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
43-013-					Ь		DIACK 18	ail Ridge	COMPLETION		וו,אואטןטווווחg & Completion
Start Time		End Time	Code		C	ategory					Com
06:00		07:00	CTRL	Crew T				CREW T	RAVEK,		
07:00	3.00	10:00	RUTB	Run Tu	bing						1-JT 2-3/8" TBG, XN NIPPLE, 5-JTS 2-3/8" L-80 BG. THRU 4-1/2" LT AT 6998' AND SET PKR AT
10:00	1.00	11:00	PTST	Pressu	re Test			PRES TE BLEED C		INER LA	AP TO 2000 PSI FOR 15 MIN. GOOD TEST.
11:00	3.00	14:00	PULT	Pull Tul	bing			RELEAS	E PKR. POOH AS LD 2	2-7/8" TE	BG, X-OVER, 2-3/8" AND PKR.
14:00	3.50	17:30	LOGG	Logging	3			LOG FRO	3948" FAIR. TOC AT 3	FAIR. 7). 480' TO LINERTOP AT 6998' FAIR TO RATTY. O SLB. RD TBG EQUIP.

Sı	ındry N	Tumbe	r: 3	5292 <i>I</i>	API Wei	ll Numk	oer: 4	1301351216	60000	
B	Bill B	arret	t Co	rporat	ion					
Time Lo	og .									
Start Time		End Time			Category					Com
17:30	0.50	18:00	GOP	General C	•			EQUIP. SECURE \		
18:00	12.00	06:00	LOCL	Lock Well	head & Secu	ıre	CREW T	RAVEL. WELL SEC	CURE FOR	NIGHT.
5H-1-	-46 TW E	BTR 2	2/16/2	013 06:	00 - 2/	17/2013	06:00			
API/UWI		5	State/Province	ce C	ounty	Field Nam	ne	Well Status	1	Total Depth (ftKB) Primary Job Type
43-013-						Black T	ail Ridge	COMPLETION		11,918.0 Drilling & Completion
Time Lo		1			-					
Start Time 06:00		End Time 07:00	Code	Crew Trav	Category		CREW T	DA\/EI		Com
07:00		10:30	GOP	General C					NOVE CA	ATWALK AND RACKS FOR CSG. UNLOAD 180
07:00			GOP				-JTS 4-1/	2" 11.6# P-110 CS	G. MIRU W	EATHERFORD CSG CREW.
16:30		18:00	GOP	Run Tubir			3020#. S SCREW SOLID. CSG DE' KB HANGEF 40K COM 4-1/2" PL 1-JTS 4-' 4-1/2" PL 4-1/2" PL 177-JTS HES NO SETT	TING IN AND LD 3 IN HOLD DOWN P FAIL MPRESSION IP JT I/2" CSG IP JT IP JT 4-1/2" CSG 69 GO NG AT 7005.20	24.00 .75 -2.70 2.95 42.50 9.40 8.70 3.10 905.18 1.23 (11.	WITH 4-1/2", 11.6#, P-110 CSG MADE UP TO CE OUT TO LAND IN 40K COMPRESSION. TEST ANNULUS TO 2000 PSI FOR 15 MIN. .81' STUNG INTO PBR) MOVE CATWALD AND RACKS. DRAIN EQUIP.
5H-1	│ -46 TW E	BTR 2	_ 2/17/2	013 06:	00 - 2/	18/2013 (SDFN. 06:00			
API/UWI			State/Province		ounty	Field Nam	ne	Well Status	T.	Total Depth (ftKB) Primary Job Type
43-013-						Black T	ail Ridge	COMPLETION		11,918.0 Drilling & Completion
Time Lo		I = . =		_	2 :					
Start Time 06:00	. ,	End Time 07:00	Code	Crew Tray	Category		CREW T	RA\/FI		Com
07:00									NCTALL 4" 4	10K V 7" 10K ADADTED SDOOL 4.4/46" 40K
		09:00	IWHD	Install We			FRAC VA	ALVES AND FRAC		10K X 7" 10K ADAPTER SPOOL, 4-1/16" 10K ST SEALS.
09:00		09:30	SRIG	Rig Up/Do			RDSU.			
09:30	20.50	06:00	GOP	General C	Operations		BATTER	Y UNDER CONSTI	RUCTION. F	READY TO OPEN RSI.
	46 TW E					19/2013 (
API/UWI 43-013-	51216		State/Province	ce C	ounty	Field Nam	ail Ridge	Well Status COMPLETION		Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
43-013-						DIACK I	all Kluge	CONFLETION		11,910.0 Dilling & Completion
	Dur (br)			•	Catagony		_			Com

Start Time	Dur (hr)	End Time	Code	Category	Com							
06:00	1.00	07:00	CTRL	Crew Travel	CREW TRAVEL.							
07:00	2.00	09:00	IWHD		SITP 0, SICP 0. ND BOP. INSTALL 4" 10K X 7" 10K ADAPTER SPOOL, 4-1/16" 10K FRAC VALVES AND FRAC HEAD. TEST SEALS.							
09:00	0.50	09:30	SRIG	Rig Up/Down	RDSU.							
09:30	20.50	06:00	GOP	General Operations	BATTERY UNDER CONSTRUCTION. READY TO OPEN RSI.							
5U 1	EU 1 46 TW PTP 2/19/2012 06:00 2/19/2012 06:00											

API/UWI		State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
43-013-5	1216			Black Tail Ridge	COMPLETION	11,918.0	Drilling & Completion
Time Lo	g						
						_	

L		•									
	Start Time	Dur (hr)	End Time	Code	Category	Com					
	06:00	24.00	06:00	GOP	General Operations	BATTERY UNDER CONSTRUCTION					
- [ELL 4 40 TM DTD - 0/40/0040-00-00-00/0040-00-00									

5H-1-46 TW BTR	2/19/2013 0	6:00 - 2/20/2	2013 06:00			
API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
43-013-51216			Black Tail Ridge	COMPLETION	11,918.0	Drilling & Completion
Time Log						

L		9										
	Start Time	Dur (hr)	End Time	Code	Category	Com						
	06:00	24.00	06:00	GOP	General Operations	BATTERY UNDER CONSTRUCTION						
Г												

5H-1-	46 TW B	BTR 2	2/20/20	013 06:00 -	2/21/2013 0	6:00			
API/UWI		S	state/Province	e County	Field Name	1	Well Status	Total Depth (ftKB)	Primary Job Type
43-013-5	1216				Black Ta	il Ridge	COMPLETION	11,918	3.0 Drilling & Completion
Time Lo	g								
Start Time	Dur (hr)	End Time	Code	Cat	egory			Com	
06:00	24.00	06:00	GOP	General Operatio	ns	BATTER	Y UNDER CONSTRUCTION	N.	

5H-1-46 TW	/ BTR 2/2	1/2013 06	:00 - 2/22/2	013 06:00			
API/UWI	State/F	rovince	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
43-013-51216				Black Tail Ridge	COMPLETION	11,918.0	Drilling & Completion



				-							
Time Lo	g										
Start Time	Dur (hr)	End Time			Category					Com	
06:00		08:00	GOP	General Oper						S AND 4-1/2" HES D	
08:00	2.00	10:00	ACID	Acid Wash/So	ueeze		HOOK UP TO ANNULUS. PRES TEST LINES. PUT 2000 PSI ON ANNULUS AND SHUT IN. HOOK UP TO 4-1/2" CSG. PMP 2 BPM TO START PUMPING INTO RSI AT 3116 PSI. START ACID. RATE 5.9 BPM AT 4190 PSI. ACID GONE. RATE AT 7 BPM AT 6100 PSI THEN COME DOWN TO 4822 PSI. RATE 9.6 BPM AT 5956 PSI THEN CAME DOWN TO 4420 PSI. ATTEMPT TO GET 10+ BPM BUT PUMP WOULD HOLD. WITH 155 BBLS DISPLACE HAD PRES SPIKE TO 7200 PSI. SLOW RATE. END RATE AT 8.8 AT 3382 PSI. ISIP 2368 PSI.				
10:00	3.00	13:00	WLWK	Wireline			EQUALIZE AND OPEN WELL. START RIH W/ DUMMY PLUG. HAD BALL OF GREASE IN FRAC VALVES. WORK THRU THEN CCL NOT WORKING. POOH AND X -O CCL. EQUALIZE AND OPEN WELL. RIH W/ 4-1/2" DUMMY PLUG. CORALATE TO SLB CBL LOG TO TIE IN TO LT AT 6996'. START PUMPING WITH HES AT 2 BPM AT 2500 PSI - 6 BPM AT 2780. GO TO 8 BPM TO PUMP TOOLS DOWN WHEN QUIT MOVING AT 7878'. SHUT DOWN PUMPS. UNABLE TO COME UP. STUCK TOOLS AT 74* ANGLE OF HEEL WORK LINE. NO CHANGE. FLOW BACK SLOW AS WORK LINE. NO CHANGE. SURGE VALVE QUICK. TOOLS CAME FREE. READING CCL. POOH W/ TOOLS. RD SLB AND MOVE HES OVER.				
13:00	17.00	06:00	LOCL	Lock Wellhea	d & Secure		WELL SI	HUT IN WAITING	ON COIL TB	G.	
5H-1-	46 TW E	RTR	2/22/2	013 06:00	- 2/23/	/2013 (6.00				
API/UWI	10 111 2		State/Provinc			Field Name		Well Status		Total Depth (ftKB)	Primary Job Type
43-013-5	1216	ľ	J. (1011110	o Journ,			ail Ridge	COMPLETION			.0 Drilling & Completion
Time Lo	g			•		•			•		-
Start Time	Dur (hr)	End Time			Category					Com	
06:00		20:00	GOP	General Oper	ations			ON COIL FROM			
20:00	6.00	02:00	СТИ	Clean Out			TO 4000	OPEN WELL AN	D RIH. CIRC		VES. PRES TEST STACK 11,791'. PUMP SWEEP. L HEAD. SDFN.
02:00	4.00	06:00	LOCL	Lock Wellhea	d & Secure		WELL SI	HUT IN AND SECU	JRE.		
5H-1-	46 TW E	TR	2/23/2	013 06:00	- 2/24/	/2013 (16:00				
API/UWI	70 1 VV L		State/Province		- 2/27/	Field Name		Well Status		Total Depth (ftKB)	Primary Job Type
43-013-5	1216	ľ	J. (1011110	o Journ,			ail Ridge	COMPLETION			.0 Drilling & Completion
Time Lo											
Start Time	Dur (hr)	End Time			Category					Com	
06:00		17:00	LOCL	Lock Wellhea	d & Secure			HUT IN WAITING F			
17:00		17:30	BOPI	Install BOP's						4-1/2" HES DUMMY	
17:30	2.00	19:30	WLWK	Wireline			HOOK UP HES TO CSG AND PUT 2000 PSI ON ANNULUS. PRES TEST LINE TO 8500 PSI. EQUALIZE 1000 PSI AND OPEN WELL. RIH W/ 4-1/2" DUMMY PLUG TO LINER TOP. CORRELATE TO JTS UNDER LINER TOP AT 7063' AND 7105'. RIH W/ DUMMY PLUG AS PUMP DOWN WITH HES. BEGIN 2 BPM AT 1900 PSI. END 9.9 BPM AT 3400 PSI. RUN PLUG TO 11,785'. POOH W/ DUMMY PLUG.				
19:30	2.50	22:00	PFRT	Perforating		1000 PS PUMP D SHUT DO HOLES I RD SLB	. RIH AND CORRI OWN WITH HES. OWN AT 11,776'. F N 15' AS PER DES AND HES.	ELATE TO J BEGIN 2 BF PULL UP AN SIGN. POOH	ITS BELOW LT AT 7 PM AT 2200 PSI. ENI ID PERF CR-3 FORM) INTO LUBE. EQUALIZE (1063' AND 7105'. RIH AS D 10 BBPM AT 3450 PSI. M 11,495'-11,757' WITH 60 (ERIFY ALL PERFS SHOT.	
22:00	8.00	06:00	LOCL	Lock Wellhea	d & Secure		WELL SI	IUT IN AND SECU	JRE.		
5H-1-	46 TW E	BTR :	2/24/2	013 06:00	- 2/25/	/2013 (6:00				
API/UWI 43-013-5		5	State/Provinc	e County		Field Name Black Ta	e ail Ridge	Well Status COMPLETION		Total Depth (ftKB) 11,918	Primary Job Type O Drilling & Completion
Time Lo	<u> </u>	Leurus	T 0. 4.	1	0-1					0	
Start Time 06:00	Dur (hr)	End Time 06:00	GOP	General Oper	Category		MOVE IN	AND FILLING FR	PACLINE	Com	
				<u> </u>		10040.0		TAIND FILE INC. FILE	O LINE.		
-	46 TW E			013 06:00	- 2/26/						
API/UWI 43-013-5	1216	8	State/Provinc	e County		Field Name	e ail Ridge	Well Status COMPLETION		Total Depth (ftKB)	Primary Job Type .0 Drilling & Completion
Time Lo						Diack 1	all Riuge	COMPLETION		11,910	.o Brilling & Completion
Start Time	Dur (hr)	End Time	Code		Category					Com	
06:00		06:00	GOP	General Oper				Y UNDER CONST R LOAD OUT SET			. BACKSIDE MANIFOLD



API/UWI State/Province County Field Name Well Status Total Depth (ftKB) Primary Job Type 43-013-51216 COMPLETION 11,918.0 Drilling & Completion

Time Log

	•				
Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	24.00	06:00	GOP		BATTERY UNDER CONSTRUCTION. FINISH FILLING FRAC LINE. HEAT FRAC

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	STATE OF UTAH DEPARTMENT OF NATURAL RESOU			FORM 9
	i	5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608		
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Uintah			
	posals to drill new wells, significant reenter plugged wells, or to drill horiz n for such proposals.			7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: 5H-1-46 BTR WASATCH
2. NAME OF OPERATOR: BILL BARRETT CORP				9. API NUMBER: 43013512160000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 312-8164 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2650 FNL 0284 FWL				COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 06 Township: 04.0S Range: 05.0W M	1eridian	: U	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDIC	ATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		LITER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		HANGE TUBING	CHANGE WELL NAME
Approximate date work will start:	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	□ F	RACTURE TREAT	☐ NEW CONSTRUCTION
3/5/2013	OPERATOR CHANGE		LUG AND ABANDON	PLUG BACK
	✓ PRODUCTION START OR RESUME		ECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
DRILLING REPORT	TUBING REPAIR		ENT OR FLARE	☐ WATER DISPOSAL
Report Date:	WATER SHUTOFF		I TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	c	OTHER	OTHER:
This	COMPLETED OPERATIONS. Clearly sho well had first gas sales or	n 3/5/	2013.	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 14, 2013
NAME (PLEASE PRINT) Venessa Langmacher	PHONE NUN 303 312-8172	/IBER	TITLE Senior Permit Analyst	
SIGNATURE			DATE	
N/A			3/14/2013	

	STATE OF UTAH			FORM 9
ı	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND N		5.LEASE DESIGNATION AND SERIAL NUMBER: 20G0005608	
	Y NOTICES AND REPORT		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Uintah	
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significant reenter plugged wells, or to drill hori n for such proposals.	tly deepe izontal la	en existing wells below aterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: 5H-1-46 BTR WASATCH
2. NAME OF OPERATOR: BILL BARRETT CORP				9. API NUMBER: 43013512160000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 12-8164 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2650 FNL 0284 FWL				COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SWNW Section:	HP, RANGE, MERIDIAN: 06 Township: 04.0S Range: 05.0W N	Meridian:	U	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDIC	CATE NA	TURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		TER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	С	HANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	☐ cc	OMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FR	RACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	☐ PL	LUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RE	ECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	□ su	DETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR		ENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF		TA STATUS EXTENSION	APD EXTENSION
3/1/2013				
	WILDCAT WELL DETERMINATION		THER	OTHER:
	the March 2013 Drilling A	-	_	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY April 05, 2013
NAME (PLEASE PRINT)	PHONE NUI	MBER	TITLE Permit Analyst	
Brady Riley	303 312-8115		Permit Analyst	
SIGNATURE N/A			DATE 4/5/2013	



5H-1-46 TW BTR	3/1/2013 06:00	- 3/2/2013 06:00
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	0, 1, 20 10 00.	0,2,20	. 0 00.00			
API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
43-013-51216			Black Tail Ridge	PRODUCING	11,918.0	Drilling & Completion

43-013-51216				Black Tail Ridge	PRODUCING	11,918.0 Drilling & Completion
Time Log	I = . = .					
Start Time Dur (hr) 06:00 1.50	End Time 07:30	FRAC	Category Frac. Job	CREW C	HANGE. HSM.	Com
	07.50	TIVAC	Tiac. Job	FRAC ST PRESSU OPEN W LET BALL BREAK IC PMP 400 FLUSH V STAGE X CONT XL STAGE T 7333 PSI STAGE T 6996 PSI STAGE T 6586 PSI STAGE T 6382 PSI FLUSH 5 WSI WIT ISDP 320 MAX RAT AVE RAT PMP 140	G #3- CR-3 PERFS 10,851'-1 RE TEST LINES TO 9300 PSI ELL W/ 1945 PSI AT 05:47 - FALL FOR 15 MIN. PUMP T IOWN 3886 PSI AT 10.1 BPM 0 GAL 15% HCL ACID. 10.4 E // 7331 GAL. 37.7 BPM AT 75 IL PAD. STABLE RATE OF 42 IPEN 20/60 - PAD. 53.2 BPM AT 7295 PSI O 1 PPA 20/40 WHITE. 53.2 I - O 2 PPA 20/40 WHITE. 53.1 I - O 2.5 PPA 20/40 WHITE. 58.1 - O 3 PPA 20/40 WHITE. 58.2 I - O 3 PPA 20/40 WHITE. 58.2	TO SEAT BALL. 1. BPM AT 3472 PSI. 531 PSI. 2.8 BPM AT 6566 PSI. ISIP 3274. FG .74. I. BPM AT 7327 PSI. ON PERFS 53.2 BPM AT BPM AT 7051 PSI. ON PERFS 58.0 BPM AT 0 BPM AT 6919 PSI. ON PERFS 58.1 BPM AT BPM AT 6480 PSI. ON PERFS 58.2 BPM AT
07:30 2.00	09:30	PFRT	Perforating	AND EQU PUMP DO 2500 PSI NET. PO	JALIZE 2650 PSI. OPEN WEL DWN TO DEPTH AT 10 BPM. . PULL UP AND PERF CR-3 F	1/2" CFP AND GUNS FOR STAGE 4 INTO LUB LL AND RIH. CORRELATE TO LINER TO. PULL UP AND SET CFP AT 10,821' WITH FORM 10,529'-10,791' WITH 60 HOLES IN 15' SHOT, DROP BALL. TURN WELL OVER TO
09:30 1.50	11:00	FRAC	Frac. Job	PRESSU OPEN W LET BALI BREAK E PMP 400 FLUSH W LET SOA STAGE X PERFS C CONT XL STAGE T 7151 PSI STAGE T 6775 PSI STAGE T 6728 PSI FLUSH 5 WSI WIT ISDP 306 MAX RAI AVE RAI PMP 140	RE TEST LINES TO 9300 PSI ELL W/ 2089 PSI AT 09:31 L FALL FOR 15 MIN. PUMP T DOWN 4112 PSI AT 94 BPM. O GAL 15% HCL ACID. 10.4 E 1/ 6762 GAL. 38.5 BPM AT 74 K 10 MIN. IL PAD. STABLE RATE OF 44 IPEN 24/60. PAD. 58.3 BPM AT 7275 PSI O 2 PPA 20/40 WHITE. 58.3 I O 2 PPA 20/40 WHITE. 58.2 I O 3 PPA 20/40 WHITE. 58.2 I O 3 PPA 20/40 WHITE. 58.2 I E. SABPM AT 7572 PSI. H 3000 PSI. TURN OVER TO SABPM AT 7572 PSI. H 3000 PS	TO SEAT BALL. 3PM AT 3526 PSI. 4.8 BPM AT 6012 PSI. ISIP 3256. FG .74. I. BPM AT 7325 PSI. ON PERFS 58.2 BPM AT BPM AT 7063 PSI. ON PERFS 58.2 BPM AT 3 BPM AT 6717 PSI. ON PERFS 58.2 BPM AT BPM AT 6791 PSI. ON PERFS 58.2 BPM AT WIRELINE.

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Time Log Start Time	Dur (hr)	End Time	Code	Category	Com
11:00		13:00	PFRT	Perforating	PERF STG #5- PU HES OBSIDEAN 4-1/2" CFP AND GUNS FOR STAGE 5 INTO LUB AND EQUALIZE 2600 PSI. OPEN WELL AND RIH. CORRELATE TO LINER TO. PUMP DOWN TO DEPTH AT 10 BPM. PULL UP AND SET CFP AT 10,494' WITH 2500 PSI. PULL UP AND PERF CR-3 FORM 10,207'-10,469' WITH 60 HOLES IN 15' NET. POOH AND VERIFY ALL GUNS SHOT, DROP BALL. TURN WELL OVER TO HES WITH 2400 PSI.
13:00	1.50	14:30	FRAC	Frac. Job	FRAC STG #5- CR-3 PERFS 10,207'-10,469' 60 HOLES IN 15' NET. PRESSURE TEST LINES TO 9300 PSI. OPEN WELL W/ 2081 PSI AT 13:03 LET BALL FALL FOR 15 MIN. PUMP TO SEAT BALL. BREAK DOWN 4441 PSI AT 10.4 BPM. PMP 4000 GAL 15% HCL ACID. 10.4 BPM AT 3719 PSI. FLUSH W/ 6261 GAL. 40.0 BPM AT 7317 PSI. LET SOAK 10 MIN. STAGE XL PAD. STABLE RATE OF 45.8 BPM AT 5535 PSI. ISIP 2758. FG .70. PERFS OPEN 25/60. CONT XL PAD. 59.5 BPM AT 6740 PSI. STAGE TO 1 PPA 20/40 WHITE. 60.1 BPM AT 6740 PSI. ON PERFS 60.1 BPM AT 6369 PSI. STAGE TO 2 PPA 20/40 WHITE. 60.1 BPM AT 6489 PSI. ON PERFS 60.2 BPM AT 6369 PSI. STAGE TO 2.5 PPA 20/40 WHITE. 60.1 BPM AT 6293 PSI. ON PERFS 60.2 BPM AT 6319 PSI. STAGE TO 3 PPA 20/40 WHITE. 60.1 BPM AT 6251 PSI. ON PERFS 60.1 BPM AT 6250 PSI. FLUSH 60.1 BPM AT 6350 PSI. WSI WITH 3000 PSI. TURN OVER TO WIRELINE. ISDP 3059 FG .81 MAX RATE 60.2 BPM MAX PRES 6359 PSI PMP 140,200 LBS 20/40 WHITE. 150 LBS SCALE SORB 3 SLK WTR 23,746 GAL 20# HYBOR G (16) 82,747 GAL (TOTAL FLUID 110,493 GAL) BWTR 2631 BBLS
14:30	1.84	16:20	PFRT	Perforating	PERF STG #6- PU HES OBSIDEAN 4-1/2" CFP AND GUNS FOR STAGE 6 INTO LUB AND EQUALIZE 2800 PSI. OPEN WELL AND RIH. CORRELATE TO LINER TO. PUMP DOWN TO DEPTH AT 10 BPM. PULL UP AND SET CFP AT 10,177' WITH 2500 PSI. PULL UP AND PERF CR-3 FORM 9885'-10,147' WITH 60 HOLES IN 15' NET. POOH AND VERIFY ALL GUNS SHOT, DROP BALL. TURN WELL OVER TO HES WITH 2350 PSI.
16:20	0.42	16:45	GOP	General Operations	Well Turned Over To HES. Pressure Test To 8500#. Equalize, Open To Well. Drop Ball, Let Fall 15 Minutes.
16:45	1.25	18:00	FRAC	Frac. Job	Frac Stage 6. Fluid System: Hybor G 16 Open Well, 2,052 Psi. ICP. BrokeDown At 10.5 Bpm And 3,764 Psi Pump 4000 Gals. 15% HCL. Get Stabilized Injection Of 40.0 Bpm And 7,174 Psi., Get ISIP, 3,043 Psi 0.85 Psi./Ft. F.G 25/60 Holes. Stage Into XLink Pad, 29.6 Bpm At 5,646 Psi On Perfs, 50.2 Bpm At 5,703 Psi., 18,895 Gals. Stage Into 1.0# 20/40 White Prop, 55.5 Bpm At 6,575 Psi On Perfs, 55.3 Bpm At 6,363 Psi., 10,059 Gals. Stage Into 2.0# 20/40 White Prop, 55.2 Bpm At 6,581 Psi On Perfs, 55.3 Bpm At 6,160 Psi., 15,042 Gals. Stage Into 2.5# 20/40 White Prop, 55.4 Bpm At 6,055 Psi On Perfs, 55.4 Bpm At 5,999 Psi., 26,565 Gals. Stage Into 3.0# 20/40 White Prop, 55.3 Bpm At 6,114 Psi On Perfs, 55.3 Bpm At 6,234 Psi., 12,496 Gals. Stage Into Flush, Flush 15 Bbls. Over Bottom Perf Get ISDP, 3,270 Psi 0.88 Psi./Ft. F.G WSI And Secured. Total 20/40 White Prop - 140,200# Total Clean - 116,337 Gals 2,770 Bbls BWTR - 2,960 Bbls. Max. Rate - 55.4 Bpm Avg. Rate - 55.3 Bpm Max. Psi 6,654 Psi. Avg. Psi 6,176 Psi.
18:00	0.17	18:10	CTUW	W/L Operation	Well Turned Over To WireLine. Pick Up Gun String And CFP Plug Assembly. Equalize To Well Pressure.



Time Lo	9 Dur (hr)	End Time	Code	Category	Com
18:10		19:50	PFRT	Perforating	RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 90 Degree Phasing, 3 Spf, .36" Penetration Charges, 16 Gms., .44 Dia. Holes. Correlating To SLB CBL/CCL Dated 02-15-2013. Found And Correlated To Liner Top. Started Pumping At 2 Bpm, Brought Rate UpTo 10 Bpm Until At Depth. Pull UpTo Depth, Set CFP At 9,855'. 2,500 Psi. Perforate Stage 7 CR-3 Zone, 9,563 - 9,825'. 60 Holes. 2,300 Psi POOH. LayDown Gun, Verify All Shots Fired, WSI And Secured.
19:50	0.25	20:05	GOP	General Operations	Well Turned Over To HES. Pressure Test To 8500#. Equalize, Open To Well. Drop Ball, Let Fall 15 Minutes.
20:05		21:15	FRAC	Frac. Job	Frac Stage 7. Fluid System: Hybor G 16 Open Well, 2,085 Psi. ICP. BrokeDown At 10.1 Bpm And 3,568 Psi Pump 4000 Gals. 15% HCL. Get Stabilized Injection Of 40.2 Bpm And 6,051 Psi., Get ISDP, 3,176 Psi 0.87 Psi./Ft. F.G 25/60 Holes. Stage Into XLink Pad, 29.8 Bpm At 4,961 Psi On Perfs, 50.3 Bpm At 6,016 Psi., 18,909 Gals. Stage Into 1.0# 20/40 White Prop, 59.4 Bpm At 7,035 Psi On Perfs, 59.5 Bpm At 6,844 Psi., 10,010 Gals. Stage Into 2.0# 20/40 White Prop, 59.6 Bpm At 6,590 Psi On Perfs, 59.6 Bpm At 6,278 Psi., 15,029 Gals. Stage Into 2.5# 20/40 White Prop, 59.5 Bpm At 6,289 Psi On Perfs, 59.6 Bpm At 6,285 Psi., 26,852 Gals. Stage Into 3.0# 20/40 White Prop, 59.5 Bpm At 6,454 Psi On Perfs, 59.5 Bpm At 6,319 Psi., 12,454 Gals. Stage Into Flush, Flush 15 Bbls. Over Bottom Perf Get ISIP, 3,244 Psi 0.88 Psi./Ft. F.G WSI And Secured. Total 20/40 White Prop - 140,100# Total Clean - 114,905 Gals 2,736 Bbls BWTR - 2,916 Bbls. Max. Rate - 59.6 Bpm Avg. Rate - 59.5 Bpm Max. Psi 7,105 Psi. Avg. Psi 6,438 Psi.
21:15	0.17	21:25	CTUW	W/L Operation	Well Turned Over To WireLine. Pick Up Gun String And CFP Plug Assembly. Equalize To Well Pressure.
21:25	1.66	23:05	PFRT	Perforating	RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 90 Degree Phasing, 3 Spf, .36" Penetration Charges, 16 Gms., .44 Dia. Holes. Correlating To SLB CBL/CCL Dated 02-15-2013. Found And Correlated To Liner Top. Started Pumping At 2 Bpm, Brought Rate UpTo 10 Bpm Until At Depth. Pull UpTo Depth, Set CFP At 9,533'. 2,500 Psi. Perforate Stage 8 CR-3 Zone, 9,241 - 9,503'. 60 Holes. 2,400 Psi POOH. LayDown Gun, Verify All Shots Fired, WSI And Secured.
23:05	0.25	23:20	GOP	General Operations	Well Turned Over To HES. Pressure Test To 8500#. Equalize, Open To Well. Drop Ball, Let Fall 15 Minutes.
23:20	1.17	00:30	FRAC	Frac. Job	Frac Stage 8. Fluid System: Hybor G 16 Open Well, 2,137 Psi. ICP. BrokeDown At 10.0 Bpm And 4,421 Psi Pump 4000 Gals. 15% HCL. Get Stabilized Injection Of 38.9 Bpm And 6,844 Psi., Get ISDP, 3,237 Psi 0.88 Psi./Ft. F.G 25/60 Holes. Stage Into XLink Pad, 31.6 Bpm At 5,576 Psi On Perfs, 54.7 Bpm At 6,333 Psi., 18,911 Gals. Stage Into 1.0# 20/40 White Prop, 60.4 Bpm At 7,139 Psi On Perfs, 58.9 Bpm At 6,890 Psi., 10,256 Gals. Stage Into 2.0# 20/40 White Prop, 58.8 Bpm At 6,997 Psi On Perfs, 57.2 Bpm At 6,715 Psi., 15,012 Gals. Stage Into 2.5# 20/40 White Prop, 57.3 Bpm At 6,554 Psi On Perfs, 57.3 Bpm At 6,449 Psi., 27,035 Gals. Stage Into 3.0# 20/40 White Prop, 57.3 Bpm At 6,422 Psi On Perfs, 57.3 Bpm At 6,442 Psi., 12,501 Gals. Stage Into Flush, Flush 15 Bbls. Over Bottom Perf Get ISIP, 3,481 Psi 0.91 Psi./Ft. F.G WSI And Secured. Total 20/40 White Prop - 140,200# Total Clean - 112,740 Gals 2,684 Bbls BWTR - 2,860 Bbls. Max. Rate - 60.4 Bpm Avg. Rate - 57.6 Bpm Max. Psi 7,320 Psi. Avg. Psi 6,567 Psi.
00:30	0.25	00:45	CTUW	W/L Operation	Well Turned Over To WireLine. Pick Up Gun String And CFP Plug Assembly. Equalize To Well Pressure.

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Time Lo Start Time	g Dur (hr)	End Time	Code	Category	Com
00:45		04:05	PFRT	Perforating	RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 90 Degree Phasing, 3 Spf, .36" Penetration Charges, 16 Gms., .44 Dia. Holes. Correlating To SLB CBL/CCL Dated 02-15-2013. Found And Correlated To Liner Top. Started Pumping At 2 Bpm, Brought Rate UpTo 10 Bpm Until At Depth. Pull UpTo Depth, Attemp To Set CFP, Did See Any Indication That Plug Set. POOH At 50'/Min.
04:05	0.42	04:30	стим	W/L Operation	Plug Not On When To Surface, Set At 9,200', 2,500 PsiPick Up Dummy Plug And Perf. Gun. Nipple Up To Well, Equalize.
04:30	1.50	06:00	PFRT	Perforating	RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 90 Degree Phasing, 3 Spf, .36" Penetration Charges, 16 Gms., .44 Dia. Holes. Correlating To SLB CBL/CCL Dated 02-15-2013. Found And Correlated To Liner Top. Started Pumping At 2 Bpm, Brought Rate UpTo 10 Bpm Until At Depth. Perforate Stage 9 CR-3 Zone, 8,919 - 9,181'. 60 Holes. 2,400 Psi POOH. LayDown Gun, Verify All Shots Fired, WSI And Secured.
5H-1-	46 TW E	BTR :	3/2/20 ⁻	13 06:00 - 3/3/2	2013 06:00
API/UWI		5	State/Provinc	e County	Field Name Well Status Total Depth (ftKB) Primary Job Type
43-013-5	_				Black Tail Ridge PRODUCING 11,918.0 Drilling & Completion
Time Lo	g Dur (hr)	End Time	Code	Category	Com
06:00	, ,	06:15	PFRT	Perforating	CREW CHANGE, HSM, CHECK FLUID VOLUMES.
					CONT POOH W/ GUNS FROM STG #9. VERIFY ALL GUNS SHOT. DROP BALL. TURN OVER TO HES. AFTER BALL WAS DROPPED FOUND OUT THAT BTM PART OF DUMMY PLUG WAS BROKEN. PIECES OF DUMMY PLUG IN WELL. CONT WITH FRAC.
06:15		07:45	PFRT	Perforating	FRAC STG #9- CR-3 PERFS 8919'-9181' 60 HOLES IN 15' NET. PRESSURE TEST LINES TO 9200 PSI. OPEN WELL W/ 2151 PSI AT 06:15 LET BALL FALL FOR 15 MIN. PUMP TO SEAT BALL. BREAK DOWN 4350 PSI AT 15.3 BPM. PMP 4000 GAL 15% HCL ACID. 10.6 BPM AT 3573 PSI. FLUSH W/ 5940 GAL. 45.1 BPM AT 6815 PSI. LET SOAK 10 MIN. STAGE XL PAD. STABLE RATE OF 50.7 BPM AT 6286 PSI. ISIP 2803. FG .82. PERFS OPEN 20/60. CONT XL PAD. 57.9 BPM AT 6755 PSI. STAGE TO 1 PPA 20/40 WHITE. 61.4 BPM AT 6845 PSI. ON PERFS 61.9 BPM AT 6554 PSI. STAGE TO 2 PPA 20/40 WHITE. 61.9 BPM AT 6399 PSI. ON PERFS 62.1 BPM AT 6254 PSI. STAGE TO 2.5 PPA 20/40 WHITE. 62.1 BPM AT 6258 PSI. ON PERFS 62.1 BPM AT 6320 PSI. STAGE TO 3 PPA 20/40 WHITE. 61.9 BPM AT 6418 PSI. ON PERFS 61.9 BPM AT 6438 PSI. LOST PUMP. FLUSH W/ 5 PUMPS. FLUSH 51.6 BPM AT 5719 PSI. WSI WITH 3100 PSI. TURN OVER TO WIRELINE. ISDP 3047 FG .85 MAX RATE 62.2 BPM MAX PRES 6848 PSI AVE RATE 61.4 BPM AVE PRES 6892 PSI PMP 140,500 LBS 20/40 WHITE. 150 LBS SCALE SORB 3 SLK WTR 24,825 GAL 20# HYBOR G (16) 83,180 GAL (TOTAL FLUID 112,005 GAL) BWTR 2667 BBLS
07:45	1.75	09:30	PFRT	Perforating	PERF STG #10- PU HES OBSIDEAN 4-1/2" CFP AND GUNS FOR STAGE 10 INTO LUBE AND EQUALIZE 2800 PSI. OPEN WELL AND RIH. CORRELATE TO LINER TO. PUMP DOWN TO DEPTH AT 10 BPM. PULL UP AND SET CFP AT 8889' WITH 2500 PSI. PULL UP AND PERF CR-3 FORM 8537'-8799' WITH 60 HOLES IN 15' NET. POOH AND VERIFY ALL GUNS SHOT, DROP BALL. TURN WELL OVER TO HES WITH 2300 PSI.



tart Time	•	End Time	Codo	Cotogon	Com
9:30	Dur (hr) 1.50	End Time 11:00	FRAC	Frac. Job	Com FRAC STG #10- CR-3 PERFS 8537'-8799' 60 HOLES IN 15' NET.
					PRESSURE TEST LINES TO 9300 PSI.
					OPEN WELL W/ 2158 PSI AT 12:37
					LET BALL FALL FOR 10 MIN. PUMP TO SEAT BALL. BREAK DOWN 3579 PSI AT 15.0 BPM.
					PMP 4000 GAL 15% HCL ACID. 10.3 BPM AT 3282 PSI.
					FLUSH W/ 5263 GAL. 39.9 BPM AT 5917 PSI.
					LET SOAK 10 MIN.
					STAGE XL PAD. STABLE RATE OF 51.4 BPM AT 5742 PSI. ISIP 3019. FG .85.
					PERFS OPEN 24/60.
					CONT XL PAD. 60.7 BPM AT 6655 PSI.
					STAGE TO 1 PPA 20/40 WHITE. 61.0 BPM AT 6648 PSI. ON PERFS 61.1 BPM AT
					6467 PSI. STAGE TO 2 PPA 20/40 WHITE. 61.2 BPM AT 6288 PSI. ON PERFS 61.3 BPM AT
					6085 PSI. STAGE TO 2.5 PPA 20/40 WHITE. 61.3 BPM AT 6035 PSI. ON PERFS 61.3 BPM AT 6042 PSI.
					STAGE TO 3 PPA 20/40 WHITE. 61.0 BPM AT 6228 PSI. ON PERFS 61.0 BPM AT 6381 PSI.
					CUT SAND ON 3 PPA DUE TO SHARP INCREASE IN NET PRESSURES.
					FLUSH 60.0 BPM AT 7250 PSI. SLOW RATE TO FINISH FLUSH. WSI WITH 3500 PSI. TURN OVER TO WIRELINE.
					ISDP 3623 FG .93
					MAX RATE 61.4 BPM MAX PRES 6659 PSI
					AVE RATE 61.2 BPM AVE PRES 6169 PSI
					PMP 129,200 LBS 20/40 WHITE. 150 LBS SCALE SORB 3
					SLK WTR 20,042 GAL 20# HYBOR G (16) 80,838 GAL. (TOTAL FLUID
					104,880 GAL) BWTR 2497 BBLS
					BWIR 2497 BBLS
.00	1.50	40.00	DEDT	Dowforction	PERF STG #11- PU HES OBSIDEAN 4-1/2" CFP AND GUNS FOR STAGE 11 INTO
1:00	1.50	12:30	PFRT	Perforating	LUBE AND EQUALIZE 2800 PSI. OPEN WELL AND RIH. CORRELATE TO LINER TO
					PUMP DOWN TO DEPTH AT 10 BPM. PULL UP AND SET CFP AT 8507' WITH 2500
					PSI. PULL UP AND PERF CR-3 FORM 8215'-8477' WITH 60 HOLES IN 15' NET.
					POOH AND VERIFY ALL GUNS SHOT, DROP BALL. TURN WELL OVER TO HES
					WITH 2300 PSI.
2:30	1.75	14:15	FRAC	Frac. Job	FRAC STG #11- CR-3 PERFS 8215'-8477' 60 HOLES IN 15' NET.
					PRESSURE TEST LINES TO 9200 PSI.
					OPEN WELL W/ 2120 PSI AT 09:34
					LET BALL FALL FOR 10 MIN. PUMP TO SEAT BALL. BREAK DOWN 3855 PSI AT 15.2 BPM.
					PMP 4000 GAL 15% HCL ACID. 10.5 BPM AT 3613 PSI.
					FLUSH W/ 5420 GAL. 42.5 BPM AT 6970 PSI.
					LET SOAK 10 MIN.
					STAGE XL PAD. STABLE RATE OF 51.6 BPM AT 5562 PSI. ISIP 3136. FG .86. PERFS OPEN 27/60.
					CONT XL PAD. 60.4 BPM AT 6385 PSI.
					STAGE TO 1 PPA 20/40 WHITE. 60.5 BPM AT 6421 PSI. ON PERFS 60.6 BPM AT 6226 PSI.
					STAGE TO 2 PPA 20/40 WHITE. 60.7 BPM AT 6084 PSI. ON PERFS 62.8 BPM AT 6104 PSI.
					STAGE TO 2.5 PPA 20/40 WHITE. 62.8 BPM AT 6142 PSI. ON PERFS 62.8 BPM AT 6157 PSI.
					NET PRESSURE CLIMBING SLOW, EXTEND 2.5 PPA FOR SAND VOLUME. 62.5 BPM AT 6321 PSI, PUMP RATE BOUNCED AT FLUSH. CAUSED SHARP INCREASE IN NET.
					FLUSH 62.3 BPM AT 6795 PSI. SLOW RATE TO FINISH FLUSH 46.2 BPM AT 6140
					PSI. WSI WITH 3300 PSI. TURN OVER TO WIRELINE.
					ISDP 3740 FG .94
					MAX RATE 62.8 BPM MAX PRES 6517 PSI
		I			AVE RATE 62.1 BPM
			1		
					SLK WTR 18,741 GAL 20# HYBOR G (16) 85,430 GAL (TOTAL FLUID



Time Lo												
Start Time	Dur (hr)	End Time				tegory					Com	
14:15	1.25	15:30	PFRT	Perforat	ting			LUBE AN PUMP DO PSI. PUL	ID EQUALIZE 2 DWN TO DEPT L UP AND PER ND VERIFY ALI	2900 PSI. OPE TH AT 10 BPM RF CR-3 FORM	EN WELL AND RIH . PULL UP AND S // 7958'-8155' WITI	GUNS FOR STAGE 12 INTO H. CORRELATE TO LINER TO SET CFP AT 8185' WITH 2350 H 60 HOLES IN 15' NET. URN WELL OVER TO HES
15:30	0.42	15:55	GOP	Genera	l Operation	ons			ned Over To HE 5 Minutes.	S. Pressure T	est To 8500#. Equ	ualize, Open To Well. Drop Ball
15:55	1.00	16:55	FRAC	Frac. Jo	ob			Open We Pump 40 ISDP, 3,3 At 5,115 On Perfs, Stage Into On Perfs, Stage	200 Gals. 15% H 154 Psi 0.89 Psi Psi 53.0 Bpm At 6 10.1 20/40 Wi 59.8 Bpm At 6 10.2 2.0# 20/40 Wi 10.3 Bpm At 6 10.3 Bpm At 5 10.4 Bpm At 5 10.3 0.4 Bpm At 5 10.4 Bpm At 5	CP. BrokeDow ICL. Get Stabi si./Ft. F.G 25 ,156 Psi., 15,3 hite Prop, 57.2 ,689 Psi., 10,0 hite Prop, 60.2 ,206 Psi., 15,0 hite Prop, 60.4 ,980 Psi., 16,1 hite Prop, 60.4 ,845 Psi., 11,4 15 Bbls. Over I 2 Psi./Ft. F.G	n At 9.7 Bpm And4 lized Injection Of 4 /60 Holes. S 2 Bpm At 6,710 Psi 151 Gals. 2 Bpm At 6,497 Psi 136 Gals. 4 Bpm At 6,063 Psi 59 Gals. 4 Bpm At 5,858 Psi 171 Gals. Bottom Perf. WSI And Secured	i0.9 Bpm And 5,963 Psi., Get Stage Into XLink Pad, 28.7 Bpn i i i
10.55	42.00	00.00	1.001	L o ole VV	م المحمدال	Caaura		///CI // ~ 4	Coourad MOD	II On E CD 4E	DTD	
16:55		06:00	LOCL		ellhead &				Secured. MOR	.U UN 5-6D-45	BIR	
_	46 TW E				:00 -	3/4/20						
API/UWI 43-013-5		S	State/Provinc	ce	County		Field Name Black Ta	^e ail Ridge	Well Status PRODUCING		Total Depth (ftKB)	Primary Job Type 918.0 Drilling & Completion
Time Lo		I = . =										
Start Time	Dur (hr)	End Time	Code		Ca	tegory					Com	
5H-1-	46 TW E	TR :	3/7/20	13 06:	:00 -	3/8/20	13 06:	00				
API/UWI		18	State/Province	се	County		Field Name		Well Status		Total Depth (ftKB)	Primary Job Type
43-013-5							Black Ta	ail Ridge	PRODUCING		11,9	918.0 Drilling & Completion
Time Lo Start Time		I Fad Time	Cada		0-						C	
06:00	Dur (hr) 8,50	End Time 14:30	FBCK	Flowbac		tegory		WELL FL	OWING TO SA	J FS WAITING	Com G ON COIL TBG.	
14:30		16:00	SRIG	Rig Up/				1	SPOT AND RU			
16:00		17:00	GOP		l Operation	ne					HECKS BIDLIVE	R. HYD DISCONNECT. CIRC
10.00	1.00	17.00	GOP	General	i Operali	J110			ITATOR, MOTO	, -	,	C TEST TOOLS. MU LUBE.
17:00	2.50	19:30	RUTB	Run Tul	bing			RIH W/ M	IILL ON COIL A	AS CIRC .5 BP	M. START CIRC 2	2.5 BPM AT 6800'.
19:30		03:00	DOPG	Drill Out	Ū							89' (13 MIN), RIH AND TAG #4
					3-			AT 9200'. MIN), 953	MAKE WIPER 33' (50 MIN), AN	TRIP TO 690 ND 9855' (91 N	0'. RUŃ BACK DO	DWN. D/O PLUGS AT 9200' (3: U #6). RIH AND TAG #7 AT
03:00	2.00	05:00	PULT	Pull Tub	oing			POOH TO	X-OUT MILL	AND MOTOR.		
05:00		05:00	RUTB	Run Tul	bing			MU NEW W/ 2" CO		OY MILL AND	MOTOR. PRES T	EST LUBE TO 5000 PSI. RIH
5H-1-	46 TW E	BTR :	3/8/20	13 06:	:00 -	3/9/20	13 06:	00				
API/UWI 43-013-5	1216		State/Province	се	County		Field Name		Well Status PRODUCING		Total Depth (ftKB)	Primary Job Type 918.0 Drilling & Completion
43-013-5	01210						DIACK 1	ail Ridge	LKODOCING		11,8	a ro.u uning & Completion



1	End Time 07:20	Code TRIP	Category Tripping		Com Dunning In Linia With Mill #2. Di Di Ing Lindaudia Diagonagat Duni Cira Cub. Asitatas
1.34					
1	07:20	TRIP	Tripping		I Dunaina la Hala With Mill 40 Di Di Lau Undas dis Dissas Control Control Control
0.50					Running In Hole With Mill #2, Bi-Di Jar, Hydraulic Disconnect, Dual Circ. Sub, Agitator And Motor. Static Well Pressure 750#. At 200' Open Well To FlowBack, .5 Bpm Returns, 500#'s. Start Pumping At 2 Bpm At 6000', 600#'s Flowing Pressure, 3 Bpm Returns.
	07:50	CLN	Clean Out Hole		Tag CFP #7 At 10,177', 3.0 Bpm Returns, 550#. DrillOut In 31 Min., 3.0 Bpm Returns, 400#.
0.17	08:00	TRIP	Tripping	·	TIH To Next Plug.
0.58	08:35	CLN	Clean Out Hole		Tag CFP #8 At 10,494', 3.0 Bpm Returns, 400#. DrillOut In 34 Min., 3.0 Bpm Returns, 300#.
0.67	09:15	TRIP	Tripping	-	TIH To Next Plug. 150' Of Sand.
0.75	10:00	CLN	Clean Out Hole	-	Tag CFP #9 At 10,821', 3.0 Bpm Returns, 300#. DrillOut In 46 Min., 3.0 Bpm Returns, 300#.
2.17	12:10	TRIP	Tripping		TIH To Next Plug. 300' Of Sand.
1.00	13:10	CLN	Clean Out Hole	-	Tag CFP #10 At 11,143', 3.0 Bpm Returns, 500#. DrillOut In 60 Min., 3.0 Bpm Returns, 500#.
1.50	14:40	TRIP	Tripping	l I	TIH To Next Plug. 280' Of Sand.
					Tag CFP #11 At 11,465', 3.0 Bpm Returns, 600#.
				Į.	DrillOut In 75 Min., 3.0 Bpm Returns, 550#.
			•		Pump 2 20 Bbl. Sweeps. Circulate 30 Minutes.
					POOH With Coil.
			1. 0		IND EQUIP. MOVE OVER, TURN WELL OVER TO FBC AND SALES.
			· ·		WELL ON PROD TO SALES.
46 IW B					
51216	S	tate/Provinc	e County	Black Tai	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	End Time	Code	Category		Com
1.00	07:00	CTRL	Crew Travel	1	CREW TRAVEL.
1.00	08:00	WKLL	Kill Well		PMP 140 BBLS HOT WTR. PRES TO 1200 PSI.
0.50	08:30	FBCK	Flowback Well		FLOW BACK TO PROD TANKS.
1.00	09:30	GOP	General Operations	h	ND FRAC VALVES. NU BOP. RU FLOOR.
2.50	12:00	WKLL	Kill Well		STING OUT OF LINER. PMP 300 BBLS (150 HOT, 150 COLD) AS CIRC TO PROD TANKS.X-OVER FOR 4.5"
1.00	13:00	GOP	General Operations		RU CSH CREW. WAITED ON LD MACHING.
0.50	13:30	GOP	General Operations		SPOT CATWALK AND RACKS.
		PULT	Pull Tubing		POOH AS LD 4-1/2" CSG
			Ŭ		FLUSH CSG W/ 70 BBLS HOT WTR.
		1	•	l I	CONT POOH AS LD 4-1/2" CSG. 178-JTS TOTAL.
					RD CSG CREW. SWIFN W/ CSG TO TREATER.
			•		CREW TRAVEL. WELL SECURE FOR NIGHT.
			013 06:00 - 3/29/2		l .
				Field Name	
51216			·	Black Tai	ail Ridge PRODUCING 11,918.0 Drilling & Completion
g					T
			1		Com CREW TRAVEL.
			'		BWD, 50 PSI ON CSG. X-O FOR 2-7/8" TBG.
4.50	12:30	KUIB	Kun rubing		MU PROD BHA AND PU AS RIH W/ PROD TBG.
					TBG DETAIL HANGER 209-JTS 2-7/8" TBG 7" 8RD SET TAC. 2 JTS 2-7/8" TBG PSN 4' TBG SUB DESANDER 4 JTS 2-7/8" TBG 2-7/8" X 3" XO 3" X 4" XO 4" BP.
	0.75 2.17 1.00 1.50 1.33 0.83 0.50 2.67 0.50 10.00 46 TW B 1216 9 Dur (hr) 1.00 0.50 1.00 2.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50 1.00 0.50	1216 S S	0.75 10:00 CLN 2.17 12:10 TRIP 1.00 13:10 CLN 1.50 14:40 TRIP 1.33 16:00 CTU 0.83 16:50 TRIP 0.50 17:20 CLN 2.67 20:00 TRIP 0.50 20:30 GOP 10.00 06:30 FBCK 46 TW BTR 3/27/20 1216 9 Dur (hr) End Time Code 1.00 07:00 CTRL 1.00 08:00 WKLL 0.50 08:30 FBCK 1.00 09:30 GOP 2.50 12:00 WKLL 1.00 13:00 GOP 2.50 12:00 WKLL 1.00 13:00 GOP 2.50 15:30 PULT 0.75 16:15 GOP 2.75 19:00 PULT 0.50 19:30 GOP 10.50 06:00 LOCL 46 TW BTR 3/28/20 1216 9 Dur (hr) End Time Code 1.00 07:00 CTRL 1.00 08:00 GOP	0.75 10:00 CLN Clean Out Hole	0.75



Time Lo	Time Log											
Start Time	Dur (hr)	End Time	Code	Category	Com							
12:30	1.00	13:30	BOPR	Remove BOP's	SET TAC. RD FLOOR. ND BOP. LAND HANGER IN 20K TENSION.							
13:30	1.00	14:30	GOP	General Operations	FLUSH TBG W/60 BBLS HOT WTR.							
14:30	1.50	16:00	GOP	General Operations	X-O FOR RODS. RACK OUT EQUIP. CLEAN LOCATION. SDFN W/ CSG OPEN TO TREATER.							
16:00	14.00	06:00	LOCL	Lock Wellhead & Secure	CREW TRAVEL. WELL SECURE FOR NIGHT.							

5H-1-46 TW BTR	3/29/2013 00	6:00 - 3/30/2	2013 06:00			
API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
43-013-51216			Black Tail Ridge	PRODUCING	11,918.0	Drilling & Completion

Time Lo	g				
Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	1.00	07:00	CTRL	Crew Travel	CREW TRAVEL
7:00	2.00	09:00	GOP	General Operations	CHECK PRES. TBG 20 PSI. BWD. PREP RODS AND RU FLOW LINE.
09:00	4.00	13:00	RURP	Run Rods & Pump	PU AND PRIME PUMP. RIH AS PU RODS.
					ROD DETAIL 1-1/2" X 26' POLISH ROD 2', 6', 8', X 7/8" PONY RODS 92) 7/8" W/ 4G 137) 3/4" W/ 4G 40) 1" W/ 4G SHEAR CPLG 25-175-RHBC-20-5-21-24 PMP
13:00	2.50	15:30	GOP	General Operations	SPACE OUT RODS. HANG HORSE HEAD. ROLL UNET AND CHECK PUMP ACTION. GOOD TEST. NO TAG. RD RIG. RACK OUT TOOLS. TURN OVER TO PRODUCTION. (WEIGHT HEAVY)
15:30	0.50	16:00	RMOV	Rig Move	ROAD RIG TO 13H-33-46. SDFN
16:00	14.00	06:00	GOP	General Operations	WELL TURNED OVER TO PRODUCTION DEPT. CREW TRAVEL

www.peloton.com Page 8/8 Report Printed: 4/4/2013

Form 3160-4 (August 2007)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED
MB No. 1004-0137
Expires: July 31, 2010

	WELL	COMPL	ETION (OR RECO	MPLETI	ON RI	EPORT	AND LO	G			ease Serial N OG000560		
1a. Type o	f Well	Oil Well	. 🔲 Gas	Well	Dry 🔲	Other					6. If	Indian, Allo	ottee or	Tribe Name
b. Type o	of Completion	n 🗷 N	lew Well er	☐ Work O	ver 🔲 I	Deepen	☐ Plu	g Back 🔲	Diff. R	esvr.	7. U	nit or CA A	greeme	ent Name and No.
2. Name o	f Operator	ORPORA	TION F		Contact: \	/ENESS	SA LANG	MACHER				ase Name a		ll No.
3. Address		H STREE	T SUITE 2		,	3a.		o. (include ar	ea code)			PI Well No.		43-013-51216
4. Location	n of Well (Re	port locati		nd in accorda	ince with Fe							ield and Po		
At surfa	ace SWN\	N 2650FN	NL 284FWL Sec	1 T4S R6W	V Mer UBM						11. S	ec., T., R.,	M., or	Block and Survey S R5W Mer UBM
	· Se	c 1 T4S R	elow SEN R6W Mer UI DFNL 678F	NE 1931FNI BM	_ 661FEL				,		12. (County or Pa	arish	13. State
14. Date S 09/14/2	pudded	71447 2000	15. D	ate T.D. Rea /03/2012	ched		□ D &	Completed A Re 5/2013	ady to P	rod.		Elevations (I		B, RT, GL)*
18. Total I	Depth:	MD TVD	1191 7403	B 19.	Plug Back	T.D.:	MD TVD	1183 - 73 9		20. Dep	th Brid	ige Plug Se		MD TVD
	Electric & Otl	ner Mecha		un (Submit c	copy of each)	112		2. Was v	vell corec		⊠ No [¬ Yes	(Submit analysis) (Submit analysis)
	nd Liner Rec		ort all strings	set in well)				<u></u>	Direct	OST run? tional Sur	vey?	□ No	Yes	(Submit analysis)
Hole Size	Size/G		Wt. (#/ft.)	Top (MD)	Bottom (MD)	1 -	Cementer Depth	No. of S		Slurry (BB		Cement T	op*	Amount Pulled
26.000	16.00	0 COND	65.0	 ` 	 ` 			71						
12.250		625 J-55	36.0		+		2508		535		225		0	
8.750 6.125		00 P-110 00 P-110	26.0 11.6	t	1 1 1 1		7926 11921		890 265		312 126		3946 6996	
0.123	4.50	JU P-110	11.0	0990	1192	+	11921	l — —	200		120		0990	
24. Tubing				<u> </u>	 	4.0.0			(A (T))		T 5	4.0.00	<u>,, , , , , , , , , , , , , , , , , , ,</u>	n. I. D. 4 0.00
Size 2.875	Depth Set (N	<u>ир) Ра</u> 6866	acker Depth	(MD) Si	ize Der	th Set (N	MD) P	acker Depth	(MD)	Size	De	pth Set (MI	<u>"</u>	Packer Depth (MD)
	ng Intervals	00001			26	. Perfora	ation Reco	ord						- · · ·
Fe	ormation		Тор	Во	ottom	P	erforated	Interval		Size	N	lo. Holes		Perf. Status
<u>A)</u>	WASA	ATCH		7958	11757			7958 TO 1	1757	0.4	10	720	OPEN	<u> </u>
B)									-	· · · ·				
C) D)											+			
	racture, Treat	ment, Cen	nent Squeeze	e, Etc.										
	Depth Interv						Aı	mount and T	ype of M	aterial				
	795	58 TO 117	757 SEE AT	TACHED STA	AGES 1-12		-			=	-			
			-	_	•				•					
														
28. Product	ion - Interval	Α	,											
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gr Corr.		Gas Gravity		Producti	on Method		•
03/05/2013	03/10/2013	24	$\overline{}$	52.0	49.0	109.0		52.0				FLOW	S FRO	M WELL
Choke Size 22/64	Tbg. Press. Flwg. 0 SI	Csg. Press. 150.0	24 Hr. Rate	Oil BBL 52	Gas MCF 49	Water BBL 109	Gas:O Ratio	ii 942	Well St	atus OW				
28a. Produc	tion - Interva	ıl B												
Date First Produced	Test Date	Hours Tested	Test Production		Gas MCF	Water BBL	Oil Gr Corr. A		Gas Gravity		Producti	on Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate		Gas MCF	Water BBL	Gas:O Ratio	il	Well Sta	atus			RE	CEIVED
C-a Instruct	L	age for ada	ditional data	on ravara si	ida)						-		ΔPI	7 0 4 2013

28h Prod	luction - Interv	al C							,,,,,,,		· · · · · · · · · · · · · · · · · · ·
Date First	Test	Hours	Test	Oil	Gas	Water	Oil Gravity	Gas		Production Method	
Produced	Date	Tested	Production	BBL	MCF	BBL	Corr. API	Gravi	ty		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well	Status		
28c. Prod	uction - Interv	al D									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravit	ty	Production Method	
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well 8	Status		
29. Dispo	sition of Gas(Sold, used f	or fuel, vent	ed, etc.)			•				
	nary of Porous	Zones (Inc	lude Aquife	rs):					31. For	mation (Log) Markers	
Show tests,	all important	zones of po	rosity and c	ontents there	of: Cored in tool open,	atervals and a	all drill-stem shut-in pressures	•			
	Formation		Тор	Bottom		Description	ns, Contents, etc.			Name	. Top Meas. Depth
TOC	ional remarks (was calculate hed is treatm	ed by CBL	. First gas s	sales were	on 3/5/13.	Conductor	cemented with	grout.	MA TG DC BL CA UT	REEN RIVER HOGANY HOGANY HOGANY HOGANS HOGLAS CREEK ACK SHALE STLE PEAK ELAND BUTTE ASATCH	2674 3521 4753 5645 6485 6767 7094 7335
1. Ele	enclosed attacectrical/Mecha	nical Logs	•			2. Geologic 5. Core Ana	-		DST Re	port 4. Direct	ional Survey
		_	Electi	onic Submi For BH	ission #2033	69 Verified	by the BLM W PRATION, sent	ell Inform to the Ve	nation Sy rnal	e records (see attached instructions.	tions):
Name	(please print)	<u>veness/</u>	A LANGMA	OHEK W	-crowny	Jud	incon/ine 2	ENIUR P	ERIVII F	NATIO	-
Signat	ture	(Electronic	c Submissi	on)			Date <u>0</u> 4	1/04/2013	<u> </u>		
Title 18 U	J.S.C. Section	1001 and T	itle 43 U.S.	C. Section 1:	212, make it	a crime for	any person knows to any matter w	ingly and	willfully risdiction	to make to any department on	agency

Bill Barrett Corp

Duchesne County, UT (NAD 1927) Sec. 6-T4S-R5W (BTR 6-45 PAD) Wasatch 5H-1-46 BTR - A2

Plan B

Design: MWD Final Surveys

Sperry Drilling Services **Standard Report**

07 January, 2013

Well Coordinates: 667,607.37 N, 2,279,393.88 E (40° 09' 43.12" N, 110° 30' 01.08" W)

Ground Level: 5,932.00 ft

Local Coordinate Origin:

Centered on Well Wasatch 5H-1-46 BTR - Slot A2

Viewing Datum:

KB=23' @ 5955.00ft (Nabors M-22)

TVDs to System:

North Reference:

True

Unit System:

API - US Survey Feet - Custom

Geodetic Scale Factor Applied Version: 2003.16 Build: 431

SPERRY-SUN DRILLING SERVICES

CERTIFIED SURVEY WORK SHEET

			i						
OPERATOR:	Bill Barrett					Number :		9878351	
WELL:	5H-1-46 TV				Start Dat	te of Job :		11/1/2012	
field:	BTR				End Date	of Job:		11/30/2012	****
RIG:	Nabors	M22			Lead Dir	ectional Driller:		Paul St. Onge	
Legals:	Sec. 6-T4S	3-R5W						Wesley Cline	
COUNTY:	Duches	ine			Other 88	DS DD's :		Glen Kumm	
STATE:	Utah								
CAL. METHOD:	Min. Cu	ITV.			ssds mv	/D Engineers :		Freddy Hale	
MAG. DECL. APPLIED:	11.37	0						J.T. Smith	
VERTICAL SEC. DIR. :	278.00	00							
						Engineer :			
	Main Hole =====		A	2nd Side Track =		3rd Side Track ===		4th Side Track ==	
Surface Casing	82'	Tie-on	Tie On		Tie On		Tie On		Tie On
First Wireline Survey		SS	MWD					ļ	
Last Wireline Survey		33			- 				+
		-			1				
KOP Depth/Sidetrack MD		КОР	KOP-ST1		KOP-ST2		KOP-ST3		KOP-ST4
MWD Tie-on									
First MWD Survey Depth	146'	MWD	MWD		MWD		MWD		MWD
Last MWD Survey Depth	11846'	MWD	MWD		MWD		MWD		MWD
Bit Extrapolation @ TD	11918'	T.D.	T.D.		T.D.		T.D.		T.D.
	The following Sp	Paul St. On	Services personnel, certify th	e above survey in Wesley Cline	formation to			r knowledge:	
	Sign Name :	Paul St.	Sign Name :	ango	2		Sign Name	Mr	
	Print Name :	Freddy Hal	e Print Name :	J.T. Smith			rint Name	:	
	Sign Name : /	MM	M Sign Name :	118			Sign Name	•	
Tied <u>Examples of</u> MW <u>Survey Types:</u> ESS Gyr SS	D Sperry-Sun Drill Sperry-Sun Drill Gyro Survey's;	ling Services ling Services Provided by	sumed Vertical), Tie On to be (SSDS) Measurement While I (SSDS) Electronic Survey Systhird party vendor, or by Spe trovided by Sperry-Sun Drillin	Orilling (MWD) Sur stem (ESS) Surve rry-Sun Drilling So	vey's y's ervices (SSI	os)			

Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00
146.00	0.37	272.100	146.00	0.02	-0.47	0.47	0.25
First Sperry	MWD Survey	@ 146.00' MD)				
208.00	0.67	267.410	208.00	0.01	-1.03	1.02	0.49
270.00	0.47	262.920	269.99	-0.04	-1.65	1.63	0.33
332.00	0.15	75.270	331.99	-0.05	-1.82	1.80	1.00
394.00	0.44	77.640	393.99	0.02	-1.51	1.50	0.47
455.00	0.37	83.440	454.99	0.09	-1.09	1.09	0.13
516.00	0.31	100.220	515.99	0.09	-0.73	0.73	0.19
578.00	0.20	152.860	577.99	-0.04	-0.51	0.50	0.40
639.00	0.39	199.170	638.99	-0.33	-0.53	0.48	0.48
701.00	0.64	205.540	700.99	-0.84	-0.75	0.63	0.41
762.00	0.77	214.980	761.98	-1.48	-1.13	0.92	0.29
824.00	0.67	254.300	823.98	-1.92	-1.72	1.44	0.80
888.00	1.04	265.910	887.97	-2.07	-2.66	2.35	0.64
951.00	1.19	264.150	950.96	-2.17	-3.88	3.54	0.24
1,014.00	1.31	273.900	1,013.94	-2.19	-5.25	4.90	0.39
1,077.00	1.38	275.700	1,076.92	-2.07	-6.72	6.37	0.13
1,141.00	1.58	304.370	1,140.90	-1.49	-8.22	7.93	1.18
1,204.00	1.78	308.550	1,203.88	-0.39	-9.70	9.55	0.37
1,267.00	1.91	303.670	1,266.84	0.80	-11.34	11.34	0.32
1,331.00	2.03	308.610	1,330.81	2.10	-13.11	13.28	0.32
1,394.00	2.12	302.280	1,393.77	3.42	-14.97	15.30	0.39
1, 4 57.00	2.44	307.510	1,456.72	4.86	-17.02	17.53	0.61
1,520.00	2.53	306.750	1,519.66	6.50	-19.20	19.92	0.15
1,584.00	2.69	319.100	1,583.59	8.48	-21.31	22.29	0.91
1,647.00	2.75	331.740	1,646.52	10.93	-23.00	24.30	0.95
1,710.00	3.57	333.090	1,709.42	14.01	-24.60	26.31	1.31
1,773.00	4.54	336.490	1,772.27	18.05	-26.48	28.74	1.59
1,837.00	4.97	338.200	1,836.05	22.95	-28.52	31.44	0.71
1,900.00	4.98	340.440	1,898.81	28.06	-30.45	34.06	0.31
1,963.00	5.89	341.730	1,961.52	33.70	-32.38	36.76	1.46
2,027.00	6.46	340.500	2,025.15	40.21	-34.61	39.87	0.91
2,090.00	7.21	338.400	2,087.70	47.23	-37.25	43.46	1.25
2,152.00	8.08	338.100	2,149.15	54.89	-40.31	47.56	1.40
2,216.00	8.75	337.890	2,212.46	63.57	-43.82	52.24	1.05
2,279.00	9.34	338.830	2,274.68	72.78	-47.47	57.14	0.97
2,342.00	9.99	342.170	2,336.79	82.75	-50.99	62.01	1.36
2,405.00	10.61	344.000	2,398.77	93.53	-54.26	66.75	1.11
2,441.00	11.17	342.960	2,434.12	100.05	-56.19	69.58	1.65
2,536.00	10.63	338.550	2,527.41	117.00	-62.10	77.78	1.05
2,599.00	10.19	334.570	2,589.37	127.44	-66.61	83.71	1.34
2,662.00	11.65	334.320	2,651.23	138.21	-71.76	90.31	2.32
2,725.00	12.21	334.000	2,712.87	149.93	-77.44	97.56	0.90
2,789.00	11.41	331.040	2,775.51	161.55	-83.47	105.15	1.57
2,852.00	10.97	328.680	2,837.32	172.12	-89.61	112.70	1.01
2,915.00	11.20	327.190	2,899.14	182.39	-96.04	120.49	0.58
2,978.00	11.28	329.740	2,960.93	192.85	-102. 4 6	128.31	0.80
3,042.00	10.93	332.740	3,023.74	203.65	-108.39	135.69	1.06
3,105.00	10.35	333.050	3,085.65	214.01	-113.69	142.38	0.93

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
3,168.00	10.59	335.040	3,147.60	224.30	-118.70	148.77	0.69
3,232.00	10.93	337.420	3,210.48	235.23	-123.51	155.06	0.87
3,295.00	10.71	339.540	3,272.36	246.23	-127.85	160.88	0.72
3,358.00	11.18	341.320	3,334.21	257.50	-131.85	166.42	0.92
3,422.00	12.14	341.980	3,396.89	269.78	-135.92	172.16	1.51
3,485.00	12.13	338.210	3,458.48	282.23	-140.43	178.35	1.26
3,548.00	10.52	330.490	3,520.26	293.38	-145.72	185.14	3.50
3,611.00	10.07	326.060	3,582.25	302.95	-151.63	192.33	1.44
3,675.00	11.46	330.070	3,645.12	313.11	-157.92	199.98	2.47
3,738.00	12.75	334.600	3,706.72	324.81	-164.03	207.65	2.54
3,801.00	12.67	331.160	3,768.18	337.14	-170.34	215.62	1.21
3,864.00	12.46	327.480	3,829.67	348.93	-177.33	224.18	1.31
3,928.00	13.53	327.500	3,892.03	361.06	-185.06	233.53	1.67
3,991.00	13.06	326.340	3,953.34	373.20	-192.97	243.05	0.86
4,054.00	12.43	324.930	4,014.79	384.68	-200.81	252.41	1.12
4,117.00	12.11	323.780	4,076.35	395.56	-208.61	261.65	0.64
4,181.00	11.72	321.890	4,138.97	406.09	-216.59	271.02	0.86
4,243.00	11.11	320.280	4,199.74	415.64	-224.29	279.97	1.11
4,306.00	10.47	316.950	4,261.63	424.49	-232.08	288.92	1.42
4,369.00	10.22	316.920	4,323.60	432.76	-239.80	297.72	0.40
4,432.00	10.38	319.640	4,385.59	441.16	-247.30	306.31	0.81
4,496.00	10.35	320.050	4,448.55	449.96	-254.72	314.89	0.12
4,559.00	9.95	317.990	4,510.56	458.35	-262.00	323.26	0.86
4,622.00	9.91	324.180	4,572.62	466.79	-268.81	331.18	1.69
4,685.00	9.76	329.570	4,634.69	475.79	-274.69	338.26	1.48
4,749.00	9.41	331.610	4,697.80	485.07	-279.93	344.73	0.76
4,812.00	8.48	328.940	4,760.03	493.58	-284.77	350.71	1.62
4,875.00	8.19	331.250	4,822.37	501.49	-289.33	356.33	0.70
4,939.00	8.68	335.480	4,885.68	509.88	-293.52	361.65	1.23
5,002.00	8.72	337.460	4,947.95	518.62	-297.33	366.63	0.48
5,065.00	8.44	335.730	5,010.25	527.24	-301.06	371.53	0.60
5,129.00	7.41	333.940	5,073.63	535.23	-304.80	376.35	1.65
5,192.00	6.38	335.750	5,136.18	542.07	-308.03	380.49	1.67
5,255.00	5.49	331.650	5,198.84	547.92	-310.89	384.15	1.56
5,318.00	5.33	334.160	5,261.56	553.20	-313.60	387.56	0.45
5,382.00	4.55	332.990	5,325.32	558.14	-316.05	390.67	1.23
5,445.00	4.59	343.890	5,388.12	562.79	-317.88	393.14	1.38
5,508.00	5.12	339.850	5,450.90	567.85	-319.55	395.49	1.00
5,571.00	4.58	337.050	5,513.67	572.80	-321.50	398.11	0.94
5,635.00	4.88	338.910	5,577.45	577.70	-323.48	400.75	0.53
5,698.00	6.02	336.120	5,640.17	583.22	-325.78	403.80	1.86
5,761.00	6.89	333.410	5,702.77	589.62	-328.81	407.69	1.46
5,824.00	6.39	330.180	5,765.34	596.04	-332.24	411.99	0.99
5,888.00	5.70	324.200	5,828.99	601.71	-335.87	416.37	1.46
5,951.00	5.68	323.830	5,891.68	606.76	-339.54	420.71	0.07
6,011.00	5.84	326.520	5,951.38	611.70	-342.98	424.80	0.52
6,074.00	5.49	333.430	6,014.07	617.07	-346.09	428.63	1.22
6,137.00	5.60	333.360	6,076.77	622.52	-348.82	432.09	0.17
6,200.00	5.09	328.360	6,139.50	627.64	-351.67	435.62	1.10
6,264.00	4.62	318.200	6,203.27	631.98	-354.87	439.40	1.53
6,327.00	4.84	316.290	6,266.06	635.79	-358.40	443.42	0.43

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
6,390.00	4.92	313.120	6,328.83	639.56	-362.21	447.72	0.45
6,452.00	4.70	311.050	6,390.61	643.05	-366.06	452.02	0.45
6,516.00	5.04	312.430	6,454.38	646.67	-370.12	456.54	0.56
6,579.00	5.58	322.790	6,517.11	650.97	-374.01	461.00	1.74
6,642.00	5.40	338.920	6,579.82	656.18	-376.93	464.61	2.46
6,705.00	4.12	337.540	6,642.61	661.04	-378.86	467.20	2.04
6,768.00	3.28	322.600	6,705.48	664.56	-380.82	469.63	2.02
6,831.00	3.28	309.880	6,768.37	667.15	-383.30	472.45	1.15
6,895.00	3.44	291.060	6,832.26	669.01	-386.50	475.87	1.73
6,958.00	3.83	272.250	6,895.14	669.77	-390.36	479.81	1.98
7,020.00	4.65	270.180	6,956.97	669.86	-394.94	484.36	1.35
7,037.00	4.79	268.770	6,973.91	669.85	-396.34	485.74	1.07
7,068.00	4.90	263.970	7,004.80	669.68	-398.95	488.30	1.35
7,100.00	4.75	272.770	7,036.69	669.60	-401.64	490.95	2.36
7,132.00	6.69	277.680	7,068.53	669.92	-404.81	494.13	6.25
7,163.00	8.86	278.450	7,099.24	670.51	-408.96	498.32	7.01
7,193.00	12.27	279.480	7,128.73	671.37	-414.39	503.82	11.38
7,225.00	15.24	280.330	7,159.81	672.69	-421.88	511. 4 3	9.30
7,255.00	18.74	280.940	7,188.49	674.31	-430.50	520.18	11.68
7,287.00	20.53	279.040	7,218.63	676.17	-441.09	530.93	5.94
7,319.00	23.18	276.470	7,248.33	677.76	-452.89	542.83	8.80
7,350.00	27.04	276.340	7,276.39	679.22	-465.96	555.98	12.45
7,382.00	30.94	278.570	7,304.38	681.25	- 4 81.33	571.48	12.64
7,413.00	34.05	278.640	7,330.52	683.75	-497.79	588.14	10.03
7,445.00	37.43	277.670	7,356.49	686.39	-516.29	606.82	10.71
	39.37		7,381.57	689.07	-535.99	626.70	6.07
7,477.00	39.37 41.94	277.800 275.760	7,361.57 7,405.09	691.44	-556.04	646.89	9.33
7,508.00	41.94 45.07		7,403.09	693.22	-577.99	668.87	10.84
7,540.00		273.590		693.90	-600.97	691.72	9.97
7,572.00	46.80	269.860	7,450.56	693.56	-637.47	727.82	5.69
7,621.00	49.53	269.090	7,483.23				
7,653.00	49.59	269.910	7,503.99	693.35	-661.82	751.91	1.96
7,684.00	52.17	272.300	7,523.55	693.83	-685.86	775.78	10.25
7,716.00	55.41	273.610	7,542.45	695.16	-711.64	801.49	10.65
7,747.00	58.80	273.880	7,559.29	696.86	-737.61	827.45	10.96
7,779.00	62.67	274.300	7,574.93	698.86	-765.45	855.29	12.15
7,811.00	65.67	274.980	7,588.87	701.19	-794.16	884.04	9.57
7,842.00	68.87	275.930	7,600.84	703.91	-822.62	912.60	10.70
7,874.00	72.16	276.340	7,611.52	707.13	-852.61	942.75	10.35
7,905.00	76.31	277.170	7,619.94	710.64	-882.23	972.57	13.63
7,937.00	80.59	278.010	7,626.34	714.79	-913.30	1,003.91	13.62
7,969.00	84.42	278.610	7,630.52	719.37	-944.68	1,035.63	12.11
7,974.00	85.06	278.590	7,630.98	720.11	-949.61	1,040.61	12.81
8,016.00	90.67	278.610	7,632.54	726.39	-991.09	1,082.56	13.36
8,047.00	93.25	278.130°	7,631.48	730.90	-1,021.74	1,113.54	8.47
8,078.00	92.86	277.750	7,629.83	735.17	-1,052.40	1,144.50	1.76
8,109.00	92.66	277.050	7,628.33	739.16	-1,083.10	1,175.46	2.35
8,140.00	92.99	277.180	7,626.81	743.00	-1,113.83	1,206.42	1.14
8,172.00	92.45	276.440	7,625.29	746.79	-1,145.56	1,238.38	2.86
8,203.00	91.68	275.740	7,624.17	750.07	-1,176.37	1,269.34	3.36
8,235.00	92.49	275.650	7,623.01	753.25	-1,208.19	1,301.29	2.55

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
8,267.00	93.02	274.870	7,621.47	756.18	-1,240.02	1,333.22	2.94
8,298.00	93.56	273.940	7,619.69	758.55	-1,270.88	1,364.10	3.46
8,330.00	94.61	273.870	7,617.41	760.73	-1,302.72	1,395.94	3.29
8,361.00	94.80	273.870	7,614.87	762.81	-1,333.54	1,426.76	0.61
8,393.00	94.91	272.900	7,612.16	764.70	-1,365.37	1,458.54	3.04
8,424.00	94.87	272.110	7,609.52	766.05	-1,396.23	1,489.28	2.54
8,456.00	94.81	269.910	7,606.82	766.61	-1,428.11	1,520.93	6.85
8,488.00	95.04	269.560	7,604.07	766.46	-1,459.99	1,552.48	1.31
8,519.00	95.31	269.470	7,601.27	766.20	-1,490.86	1,583.01	0.92
8,551.00	94.40	269.520	7,598.56	765.92	-1,522.75	1,614.55	2.85
8,582.00	93.05	269.580	7,596.55	765.68	-1,553.68	1,645.15	4.36
8,614.00	91.75	269.170	7,595.21	765.33	-1,585.65	1,676.76	4.26
8,645.00	90.27	268.020	7,594.66	764.57	-1,616.63	1,707.33	6.05
8,677.00	89.13	267.070	7,594.83	763.20	-1,648.60	1,738.80	4.64
8,709.00	89.16	266.970	7,595.31	761.53	-1,680.56	1,770.21	0.33
8,740.00	90.64	266.710	7,595.36	759.82	-1,711.51	1,800.62	4.85
8,772.00	91.11	267.120	7,594.87	758.10	-1,743.46	1,832.02	1.95
8,803.00	92.12	266.960	7,594.00	756.50	-1,774.40	1,862.44	3.30
8,835.00	92.22	267.280	7,592.79	754.90	-1,806.34	1,893.85	1.05
8,867.00	92.18	267.060	7,591.56	753.32	-1,838.28	1,925.25	0.70
8,898.00	92.22	268.610	7,590.37	752.15	-1,869.23	1,955.74	5.00
8,930.00	92.42	268.560	7,589.08	751.36	-1,901.20	1,987.28	0.64
8,961.00	92.31	268.830	7,587.80	750.65	-1,932.16	2,017.85	0.94
8,993.00	92.92	268.720	7,586.34	749.97	-1,964.12	2,049.40	1.94
9,025.00	93.46	269.400	7,584.56	749.44	-1,996.07	2,080.97	2.71
9,056.00	93.83	269.750	7,582.58	749.21	-2,027.00	2,111.57	1.64
9,088.00	94.10	270.240	7,580.37	749.21	-2,058.93	2,143.18	1.75
9,119.00	94.17	270.400	7,578.14	749.38	-2,089.85	2,173.82	0.56
9,151.00	93.96	270.540	7,575.87	749.65	-2,121.76	2,205.47	0.79
9,214.00	92.86	269.720	7,572.12	749.79	-2,184.65	2,267.76	2.18
9,277.00	94.10	271.890	7,568.30	750.67	-2,247.52	2,330.14	3.96
9,340.00	94.98	272.980	7,563.31	753.34	-2,310.27	2,392.65	2.22
9,403.00	94.23	272.000	7,558.25	756.07	-2,373.00	2,455.15	1.95
9,467.00	93.83	272.460	7,553.75	758.55	-2,436.80	2,518.67	0.95
9,530.00	92.62	269.240	7,550.21	759.48	-2,499.68	2,581.07	5.45
9,593.00	93.53	269.770	7,546.83	758.94	-2,562.59	2,643.29	1.67
9,656.00	93.52	269.820	7,542.96	758.71	-2,625.47	2,705.53	0.08
9,719.00	93.46	269.010	7,539.12	758.07	-2,688.35	2,767.70	1.29
9,782.00	93.39	268.590	7,535.36	756.75	-2,751.22	2,829.78	0.67
9,845.00	93.66	268.470	7,531.48	755.14	-2,814.08	2,891.81	0.47
9,909.00	94.06	268.420	7,527.17	753.41	-2,877.91	2,954.77	0.63
9,972.00	94.03	268.370	7,522.73	751.65	-2,940.73	3,016.74	0.09
10,035.00	94.37	267.220	7,518.12	749.23	-3,003.51	3,078.57	1.90
10,098.00	94.70	266.670	7,513.14	745.88	-3,066.23	3,140.21	1.02
10,161.00	94.90	266.930	7,507.86	742.38	-3,128.91	3,201.79	0.52
10,224.00	94.43	266.990	7,502.74	739.05	-3,191.61	3,263.42	0.75
10,287.00	94.57	267.200	7,497.80	735.87	-3,254.33	3,325.09	0.40
10,351.00	94.54	267.250	7,492.71	732.78	-3,318.06	3,387.76	0.09
10,414.00	93.22	267.200	7,488.45	729.74	-3,380.84	3,449.51	2.10
10,477.00	93.32	266.650	7,484.86	726.36	-3,443.64	3,511.23	0.89
10,540.00	93.39	266.670	7,481.17	722.70	-3,506.43	3,572.90	0.12

Design Report for Wasatch 5H-1-46 BTR - MWD Final Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
10,603.00	92.02	267.570	7,478.20	719.54	-3,569.28	3,634.69	2.60
10,666.00	92.42	267.730	7,475.76	716.95	-3,632.18	3,696.62	0.68
10,729.00	92.18	267.780	7,473.23	714.49	-3,695.08	3,758.56	0.39
10,792.00	92.62	268.490	7,470.59	712.44	-3,757.99	3,820.58	1.33
10,855.00	92.31	267.780	7,467.88	710.39	-3,820.90	3,882.59	1.23
10,950.00	92.69	268.210	7,463.74	707.07	-3,915.75	3,976.05	0.60
11,045.00	92.65	267.990	7,459.31	703.92	-4,010.59	4,069.54	0.24
11,140.00	92.28	267.720	7,455.23	700.37	-4,105.44	4,162.96	0.48
11,234.00	92.42	266.500	7,451.37	695.64	-4,199.24	4,255.19	1.31
11,329.00	93.06	267.550	7,446.83	690.71	-4,294.00	4,348.34	1.29
11, 4 24.00	93.09	266.920	7,441.73	686.14	-4,388.75	4,441.54	0.66
11,518.00	94.97	268.650	7,435.13	682.51	-4,482.44	4,533.81	2.71
11,613.00	93.76	266.900	7,427.90	678.83	-4,577.09	4,627.02	2.24
11,708.00	.94.90	265.160	7,420.72	672.27	-4,671.59	4,719.69	2.19
11,803.00	94.60	263.350	7,412.86	662.80	-4,765.78	4,811.64	1.92
11,846.00	94.74	263.420	7,409.36	657.86	-4,808.35	4,853.11	0.36
Final Sperry	MWD Survey	s @ 11846.00	' MD				
11,918.00	94.74	263.420	7,403.41	649.64	-4,879.63	4,922.55	0.00
Straight Lin	e Projection to	TD @ 11918	.00' MD				

Design Annotations

Measured	Vertical	Local Coor	dinates	
Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
146.00	146.00	0.02	-0.47	First Sperry MWD Survey @ 146.00' MD
11,846.00	7,409.36	657.86	-4,808.35	Final Sperry MWD Surveys @ 11846.00' MD
11,918.00	7,403,41	649.64	-4,879.63	Straight Line Projection to TD @ 11918.00' MD

Vertical Section Information

Angle			Origin	Orig	Start	
Туре	Target	Azimuth (°)	Туре	+N/_S (ft)	+E/-W (ft)	TVD (ft)
Target	Wasatch 5H-1-46 BTR_Plan	278.003	Slot	0.00	0.00	0.00

Survey tool program

From	То	Survey/Plan	Survey Tool
(ft)	(ft)		
0.00	11,918.00	Sperry MWD Final Surveys	MWD

<u>Targets</u>									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
5-6D-45 BTR_Sec.1	0.00	0.00	0.00	14.93	-0.84	667,622.29	2,279,392.88	40° 9' 43.268 N	110° 30' 1.091 W
- actual wellpath - Polygon Point 1 Point 2 Point 3 Point 4 Point 5	misses ta	arget cen	-4 -4	-943.84 1,9 -943.84 -1,9 1,922.84 -1,9 1,922.84 2,0	988.93 (990.07 (978.07 (906.93	0.00 N, 0.00 669,585.46 665,607.05 665,574.58 669,558.99 669,585.46	E) 2,278,427.95 2,278,472.42 2,274,493.87 2,274,449.34 2,278,427.95		
5-6D-45 BTR Sec. 1	0.00	0.00	0.00	14.93		•	2,279,392.88	40° 9' 43.268 N	110° 30' 1.091 W
- actual wellpath - Polygon Point 1 Point 2 Point 3 Point 4 Point 5	misses ta	arget cen	-5 -5	-283.84 2,6 -283.84 -2,6 5,582.84 -2,6 5,582.84 2,6	648.93 6 650.07 6 638.07 6 666.93 6	670,252.74 664,954.52 664,907.30 670,211.52	E) 2,279,080.48 2,279,139.70 2,273,841.35 2,273,782.06 2,279,080.48		
Wasatch 5H-1-46 B7	0.00	0.00	7,390.00	686.43	-4,882.58	668,239.13	3 2,274,504.35	40° 9' 49.900 N	110° 31' 3.968 W
- actual wellpath i - Point	misses ta	rget cen	ter by 39.27	'ft at 11917.82'	ft MD (7403	.42 TVD, 649	.66 N, -4879.46 E)		
Wasatch 5H-1-46 B7		0.00	7,616.00	671.82	-1,420.30	668,263.22	2,277,966.28	40° 9' 49.760 N	110° 30' 19.374 W
- actual wellpath i - Point	misses ta	rget cen	ter by 95.13	ft at 8445.78ft	MD (7607.6	37 TVD, 766.5	56 N, -1417.93 E)		
Wasatch 5H-1-46 B7	0.00	0.00	7,408.50	686.43	-4,882.58	668,239.13	2,274,504.35	40° 9' 49.900 N	110° 31' 3.968 W
- actual wellpath i - Point	misses ta	rget cen	ter by 37.22	ft at 11916.30	ft MD (7403	.55 TVD, 649	.83 N, -4877.95 E)		
Wasatch 5H-1-46 B7	0.00	0.00	7,625.00	670.00	-984.00	668,266.27	2,278,402.54	40° 9' 49.742 N	110° 30' 13.754 W
- actual wellpath r - Point	misses ta	rget cen	ter by 55.20	ft at 8000.28ft	MD (7632.4	4 TVD, 724.0	94 N, -975.55 E)		

North Reference Sheet for Sec. 6-T4S-R5W (BTR 6-45 PAD) - Wasatch 5H-1-46 BTR - Plan B

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

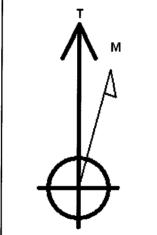
Vertical Depths are relative to KB=23' @ 5955.00ft (Nabors M-22). Northing and Easting are relative to Wasatch 5H-1-46 BTR - Slot A2 Coordinate System is US State Plane 1927 (Exact solution), Utah Central 4302 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866 Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is 111° 30' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:40° 39' 0.000 N° False Easting: 2.000.000.00ft, False Northing: 0.00ft, Scale Reduction: 0.99991507

Grid Coordinates of Well: 667,607.37 ft N, 2,279,393.88 ft E Geographical Coordinates of Well: 40° 09' 43.12'' N, 110° 30' 01.08'' W Grid Convergence at Surface is: 0.64°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,918.00ft the Bottom Hole Displacement is 4,922.69ft in the Direction of 277.58° (True).

Magnetic Convergence at surface is: -10.73° (19 October 2012, , BGGM2012)



Magnetic Model: BGG M 2012 Date: 19-0 ct-12

Declination: 11.37° Inclination/Dip: 65.75° Field Strength: 52075

Grid North is 0.64° E ast of True North (Grid Convergence)
Magnetic North is 11.37° E ast of True North (Magnetic Declination)
Magnetic North is 10.73° E ast of Grid North (Magnetic Convergence)

To convert a True Direction to a Grid Direction, Subtract 0.64°
To convert a Magnetic Direction to a True Direction, Add 11.37° E ast
To convert a Magnetic Direction to a Grid Direction, Add 10.73°

Project: Duchesne County, UT (NAD 1927) Site: Sec. 6-T4S-R5W (BTR 6-45 PAD)

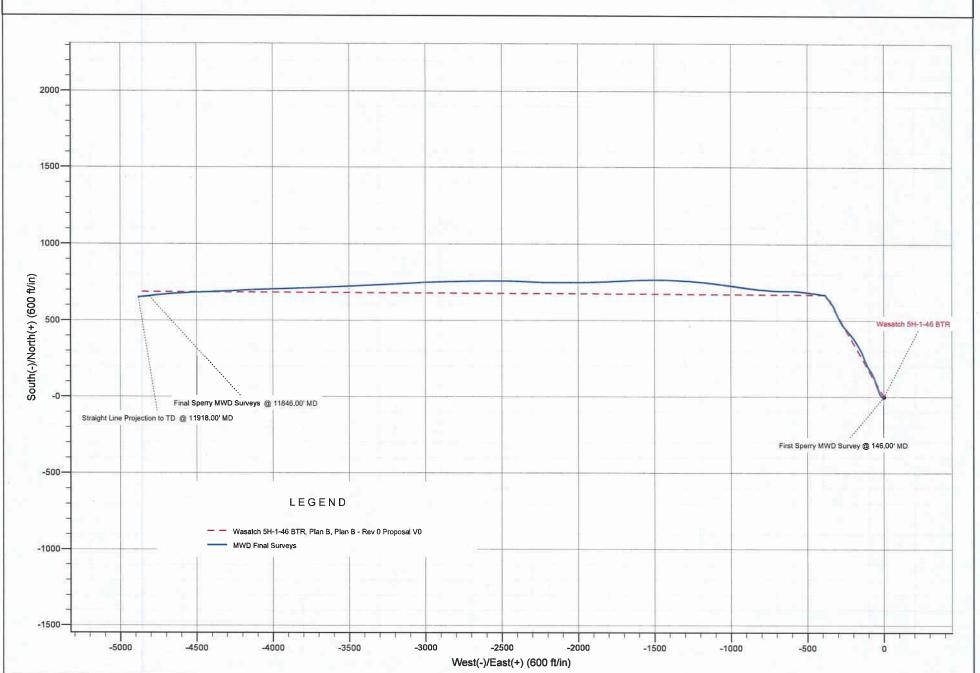
Well: Wasatch 5H-1-46 BTR

Bi

Bill Barrett Corp

HALLIBURTON

Sperry Drilling



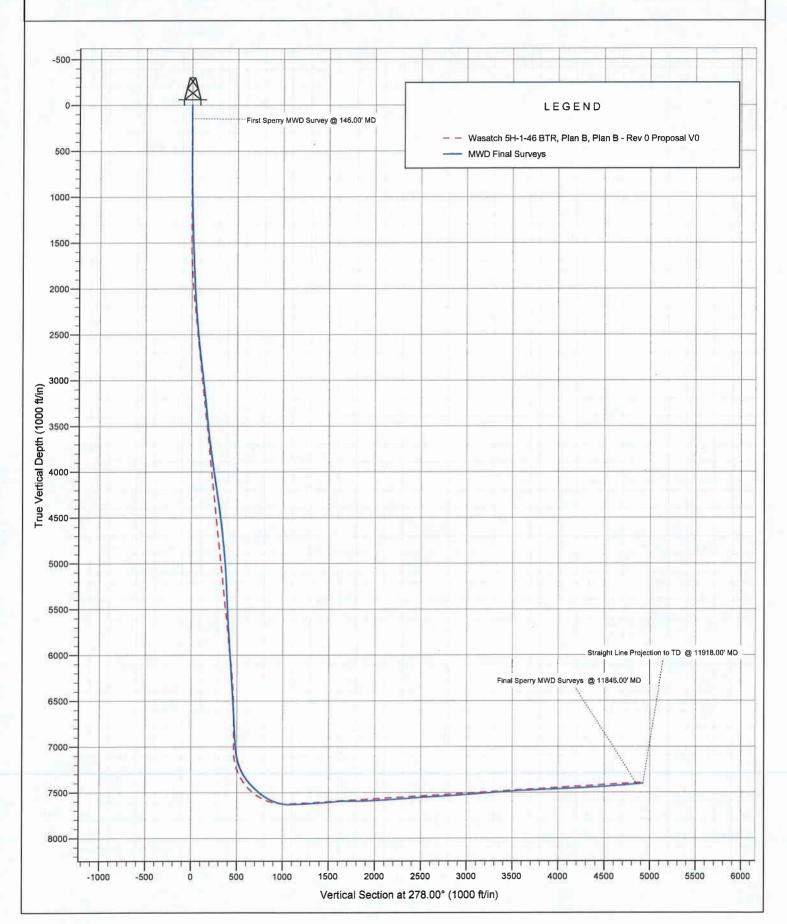
Project: Duchesne County, UT (NAD 1927) Site: Sec. 6-T4S-R5W (BTR 6-45 PAD)

Well: Wasatch 5H-1-46 BTR

Bill Barrett Corp



Sperry Drilling



5H-1-46 BTR WA Completion Report Continued*

44.	44. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC. (cont.) AMOUNT AND TYPE OF MATERIAL									
Stage	BBLS Slurry	gal 15% FE Acid	lbs 20/40 White Sand							
1	1629		140,300							
2	1626		140,200							
3	1607		140,300							
4	1603		140,300							
5	1600		140,200							
6	1600		140,200							
7	1601		140,100							
8	1601		140,200							
9	1605		140,500							
10	1479		129,200							
11	1636		141,100							
12	1266		110,400							

^{*}Depth intervals for frac information same as perforation record intervals.



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	46 TW I								
API/UWI 43-013-5	1216		State/Provin	ice	County		d Name ick Tail Ridge	Well Status PRODUCING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completi
Time Log				_	<u> </u>		lok Tall Mago	THODOGINO	11,3 to.0 Drining & Completion
Start Time	Dur (hr)	End Time	Code		Cate				Com
21:00		03:00	1		& TEARDO		Prepare	& Skid rig. Rurt.	
03:00	1.00	04:00	14	NIPPL	E UP B.O.P		N/U rise	r, flow line. Rig on day	work @ 03:00.
04:00	1.00	05:00	20	DIREC	TIONAL W	ORK	P/U dir t	ools.	
5:00	1.00	06:00	2	DRILL	ACTUAL		Drill 80'	- 150'.	
5H-1-4	46 TW E	3TR	11/2/2	012 0	6:00 -	11/3/201	2.06:00		,
(PI/UWI			State/Provin		County		Name	Well Status	Total Depth (ftKB) Primary Job Type
43-013-5	1216	ľ					ck Tail Ridge	PRODUCING	11,918.0 Drifting & Completic
Time Log)		· · · · · · · · · · · · · · · · · · ·				<u></u>	. 1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Start Time	Dur (hr)	End Time		-	Categ	gory			Com
06:00		07:30	2		ACTUAL		Drill 150		
7:30		09:00	20		TIONAL WO	ORK		ools, Scribe toolface.	
9:00	8.50	17:30	2		ACTUAL		Drill/Slide	e 176' - 586'. Wob 5k,	rpm 45/85, spp 1300 psi, dp 300 psi, rop 48 fph.
7:30	0.50	18:00	7	LUBRIC	CATE RIG		Rig Serv	ice.	
8:00	11.50	05:30	2	DRILL /	ACTUAL		Drill/Slide	e 586' - 1432'. Wob 5l	r, rpm 45/85, spp 1300 psi, dp 300 psi, rop 73 fph.
5:30	0.50	06:00	7	LUBRIC	CATE RIG		Rig Serv	ice.	
5H-1-4	16 TW E	RTR	11/2/2	012 0	6:00 -	11/4/201			
PI/UWI			State/Province		County		Name	Well Status	Total Dooth (#VO)
13-013-51	1216	ľ	vares L. I OAII (County		rname ck Tail Ridge	PRODUCING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completic
ime Log						15.0			1 1,0 10.0 Drining & Complete
tart Time	Dur (hr)	End Time		<u></u>	Categ	jory			Com
6:00	8.50	14:30	2	DRILL A	ACTUAL			e 1432' - 2096'. Wob	5k, rpm 55/99, gpm 585, spp 1300 psi, dp 300 psi, i
		ĺ					fph.		
4:30	0.50	15:00	7	LUBRIC	ATE RIG		Rig Serv	ice.	
	10.50	01:30	2	DRILL A	ACTUAL		Drill/Slide	2096' - 2511'. Wob 1	5k, rpm 55/99, gpm 585, spp 1300 psi, dp 300 psi, ı
				1					
5:00			<u> </u>				fph.		
5:00	1.00	02:30	5	1	MUD & CIR	C	i	ole, C&C f/ csg.	
5:00		02:30 07:00	5	COND	MUD & CIR	С	Sweep h	ole, C&C f/ csg.	
01:30 02:30	4.50	07:00	6	TRIPS			Sweep h	<u> </u>	
5:00 01:30 02:30 5H-1-4		07:00 TR '	6 11/4/2	TRIPS 012 00	6:00 -	11/5/201	Sweep hi TOH. L/E 2 06:00	dir tools.	ITotal Denth (flKR) Drimon Joh Tune
5:00 1:30 2:30 5 H-1-4	4.50 I6 TW E	07:00 TR '	6	TRIPS 012 00		11/5/201 Field	Sweep h	<u> </u>	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completic
5:00 1:30 2:30 5H-1-4 PI/UWI 3-013-51 ime Log	4.50 I6 TW E 216	07:00 TR '	6 11/4/2	TRIPS 012 00	6:00 -	11/5/201 Field	Sweep hi TOH. L/D 2 06:00	O dir tools.	
5:00 1:30 2:30 5H-1-4 PI/UWI 3-013-51 Time Log	4.50 4.50 4.50 Dur (hr)	07:00 BTR	6 11/4/2 tate/Province	TRIPS 012 06	6:00 - 'County	11/5/201 Field Blac	Sweep h TOH. L/D 2 06:00 Name ck Tail Ridge	Well Status PRODUCING	11,918.0 Drilling & Completic
5:00 01:30 02:30 5H-1-4 PI/UWI 3-013-51 Time Log	4.50 4.50 4.50 Dur (hr)	07:00 BTR	6 11/4/2 tate/Province	TRIPS 012 06	6:00 - '	11/5/201 Field Blac	Sweep hi TOH. L/D 2 06:00 Name ck Tail Ridge	Well Status PRODUCING J Frank's Westates, r	11,918.0 Drilling & Completic Com In 9 5/8", 36#, J-55, ST&C Csg as follows: Float sho
5:00 1:30 2:30 5 H-1-4 5/UWI 3-013-51 ime Log	4.50 4.50 4.50 Dur (hr)	07:00 BTR	6 11/4/2 tate/Province	TRIPS 012 06	6:00 - 'County	11/5/201 Field Blac	Sweep hi TOH. L/E 2 06:00 Name ck Tail Ridge HSM. R/I jt casing,	Well Status PRODUCING J Frank's Westates, r Float collar, 56 jts cs	11,918.0 Drilling & Completic
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5:00 1:30 2:30 5H-1-4 PI//UNI 51 Time Log tant Time 6:00 0:00	4.50 4.50 216 Dur (hr) 4.00 2.00	07:00 BTR / S End Time 10:00	11/4/2 state/Province Code 12	TRIPS 012 06 RUN CA	County Category ASING & CE	11/5/201 Field Black ory EMENT	Sweep h TOH. L/E 2 06:00 Name ck Tail Ridge HSM. R/I jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa	Udir tools. Well Status PRODUCING J Frank's Westates, r Float collar, 56 jts cs, couplings welded. The state of the stat	Com un 9 5/8", 36#, J-55, ST&C Csg as follows: Float show. Tagged @ 2511', set @ 2508'. R/D casers. Tess test lines to 3000 #. Pump 20 bbls H2O, 40 bbls and pump 169 bbls(300 sx) lead cement @ 11 ppg, 3 bbls(235 sx) cement @ 14.8 ppg, 1.33 yld, 6.31 gree w/ 190.6 bbls 8.9 ppg drilling mud. Full returns,
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5:00 11:30 12:30 5H-1-4 PI/UWI 3-013-51 Time Log tart Time 6:00 0:00 2:00 4:30 8:00 1:00	4.50 16 TW B 216 Dur (hr) 4.00 2.00 2.50 3.50 3.00 2.50	07:00 BTR S End Time 10:00 12:00 14:30 18:00 21:00 23:30	6 11/4/2 11/4/2 12 12 13 14 14	RUN CA COND N RUN CA WAIT O NIPPLE	Category ASING & CE MUD & CIRC ASING & CE N CEMENT UP B.O.P UP B.O.P	11/5/201 Field Black ory EMENT C EMENT	Sweep him TOH. L/E 2 06:00 Name Ck Tail Ridge HSM. R/I jt casing, Bottom 4 C&C f/ cc HSM. Ce Superflus yld, 19.48 H2O. Wa returned bump plu Cement fi Lift riser, NUBOPE Test Bop.	Use of the control of	the second complete the se
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5:00 1:30 2:30 5H-1-4 5H-1-4 5:00 5H-1-4 6:00 0:00 2:00 4:30 3:30 4:00 H-1-4	4.50 16 TW E 216 Dur (hr) 4.00 2.00 2.50 3.50 3.50 2.50 2.50 2.00	End Time 10:00 12:00 14:30 18:00 21:00 23:30 02:00 04:00 06:00 TR 1	11/4/2 Code 12 5 12 13 14 15 20 6 1/5/2(RUN CA COND N RUN CA WAIT O NIPPLE NIPPLE TEST B. DIRECT TRIPS D12 06	Catego ASING & CE MUD & CIRC ASING & CE N CEMENT UP B.O.P UP B.O.P O.P	11/5/201 Field Black ory EMENT C EMENT	Sweep him TOH. L/E 2 06:00 Name ck Tail Ridge HSM. R/I jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Ware returned bump plu Cement frum Lift riser, NUBOPE Test Bopphigh, 250 Install we Tih. Tag ce 2 06:00	Well Status PRODUCING J Frank's Westates, r Float collar, 56 jts csc couplings welded. ement. R/U HES ceme ment well as follows: F sh, 20 bbls H2O. Mix a sh up on plug, displace 80 bbls to surface. Re g to 1000 psi. Plug lar ell 4' in 1 hr. R/D HES cut csg. Weld on 11". Short test - Test blir psi low. Test surf csg ar bushing. P/U and comt @ 2451'.	Com In 9 5/8", 36#, J-55, ST&C Csg as follows: Float shot. In Tagged @ 2511', set @ 2508'. R/D casers. Inters. Press test lines to 3000 #. Pump 20 bbls H2O, 40 bbls had pump 169 bbls(300 sx) lead cement @ 11 ppg, 3 bbls(235 sx) cement @ 14.8 ppg, 1.33 yld, 6.31 greew/190.6 bbls 8.9 ppg drilling mud. Full returns, ciprocated pipe during cementing. Max press 580 psided @ 14:30. WOC. WOC. Ye 5/8" 5K SOW Csg Head.
5:00 1:30 2:30 5H-1-4 FIVIUM 3-013-51 ime Log tart Time 6:00 0:00 2:00 4:30 3:00 1:00 2:00 4:00 H-1-4	4.50 216 Dur (hr) 4.00 2.00 2.50 3.50 3.00 2.50 2.50 2.00 2.00 6 TW B	End Time 10:00 12:00 14:30 18:00 21:00 23:30 02:00 04:00 06:00 TR 1	11/4/2 Code 12 13 14 14 15 20 6	RUN CA COND N RUN CA WAIT O NIPPLE NIPPLE TEST B. DIRECT TRIPS D12 06	Catego ASING & CE MUD & CIRC ASING & CE N CEMENT UP B.O.P UP B.O.P	11/5/201 Field Black ony EMENT C EMENT ORK 11/6/201:	Sweep hi TOH. L/L 2 06:00 Name ck Tail Ridge HSM. R/l jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned bump plu Cement fl Lift riser, NUBOPE Test Bop, high, 250 Install we Tih. Tag 0	Well Status PRODUCING J Frank's Westates, r Float collar, 56 jts csc couplings welded. ement. R/U HES ceme ment well as follows: F sh, 20 bbls H2O. Mix a 3 gps H2O. Tail in w/5 sh up on plug, displace 80 bbls to surface. Re g to 1000 psi. Plug lar ell 4' in 1 hr. R/D HES cut csg. Weld on 11" Short test - Test blir psi low. Test surf csg ar bushing. P/U and c cmt @ 2451'.	Total Depth (ft/B) Tagged Drilling & Completic Com In 9 5/8", 36#, J-55, ST&C Csg as follows: Float show and the state of the state
5:00 1:30 2:30 5H-1-4 FIVUWI 3-013-51 6:00 0:00 2:00 4:30 3:00 1:00 3:30 4:00 4:00 6:00	4.50 216 Dur (hr) 4.00 2.00 2.50 3.50 3.00 2.50 2.50 2.00 2.00 6 TW B	End Time 10:00 12:00 14:30 18:00 21:00 23:30 02:00 04:00 06:00 TR 1	11/4/2 Code 12 5 12 13 14 15 20 6 1/5/2(RUN CA COND N RUN CA WAIT O NIPPLE NIPPLE TEST B. DIRECT TRIPS D12 06	Catego ASING & CE MUD & CIRC ASING & CE N CEMENT UP B.O.P UP B.O.P O.P	11/5/201 Field Black ony EMENT C EMENT ORK 11/6/201:	Sweep him TOH. L/E 2 06:00 Name ck Tail Ridge HSM. R/I jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Ware returned bump plu Cement frum Lift riser, NUBOPE Test Bopphigh, 250 Install we Tih. Tag ce 2 06:00	Well Status PRODUCING J Frank's Westates, r Float collar, 56 jts csc couplings welded. ement. R/U HES ceme ment well as follows: F sh, 20 bbls H2O. Mix a sh up on plug, displace 80 bbls to surface. Re g to 1000 psi. Plug lar ell 4' in 1 hr. R/D HES cut csg. Weld on 11". Short test - Test blir psi low. Test surf csg ar bushing. P/U and comt @ 2451'.	Com In 9 5/8", 36#, J-55, ST&C Csg as follows: Float shot. In Tagged @ 2511', set @ 2508'. R/D casers. Inters. Press test lines to 3000 #. Pump 20 bbls H2O, 40 bbls had pump 169 bbls(300 sx) lead cement @ 11 ppg, 3 bbls(235 sx) cement @ 14.8 ppg, 1.33 yld, 6.31 greew/190.6 bbls 8.9 ppg drilling mud. Full returns, ciprocated pipe during cementing. Max press 580 psided @ 14:30. WOC. WOC. Ye 5/8" 5K SOW Csg Head.
5:00 11:30 22:30 5H-1-4 PIVUWI 3-013-51 11:00 3:30 2:00 4:30 5H-1-4 FIVUWI 3-013-51 The Log	4.50 16 TW E 216 Dur (hr) 4.00 2.00 2.50 3.50 3.00 2.50 2.00 2.00 6 TW B	07:00 STR S End Time 10:00 12:00 14:30 18:00 21:00 23:30 02:00 04:00 06:00 TR 1	11/4/2 Itate/Province Code 12 5 12 13 14 14 15 20 6 1/5/20 ate/Province	RUN CA COND N RUN CA WAIT O NIPPLE NIPPLE TEST B. DIRECT TRIPS D12 06	Catego - County Catego & CE ASING & CE MUD & CIRC ASING & CE N CEMENT UP B.O.P UP B.O.P O.P TONAL WO S:00 - 1 County	11/5/201 Field Black ony EMENT C EMENT ORK 11/6/201 Field Black	Sweep hi TOH. L/L 2 06:00 Name ck Tail Ridge HSM. R/l jt casing, Bottom 4 C&C f/ ce HSM. Ce Superflus yld, 19.48 H2O. Wa returned bump plu Cement fl Lift riser, NUBOPE Test Bop, high, 250 Install we Tih. Tag 0	Well Status PRODUCING J Frank's Westates, r Float collar, 56 jts csc couplings welded. ement. R/U HES ceme ment well as follows: F sh, 20 bbls H2O. Mix a 3 gps H2O. Tail in w/5 sh up on plug, displace 80 bbls to surface. Re g to 1000 psi. Plug lar ell 4' in 1 hr. R/D HES cut csg. Weld on 11" Short test - Test blir psi low. Test surf csg ar bushing. P/U and c cmt @ 2451'.	Com In 9 5/8", 36#, J-55, ST&C Csg as follows: Float shot. Tagged @ 2511', set @ 2508'. R/D casers. Inters. Press test lines to 3000 #. Pump 20 bbls H2O, 40 bbl. and pump 169 bbls(300 sx) lead cement @ 11 ppg, 3 bbls(235 sx) cement @ 14.8 ppg, 1.33 yld, 6.31 grew/190.6 bbls 8.9 ppg drilling mud. Full returns, ciprocated pipe during cementing. Max press 580 ps. and @ 14:30. WOC. K 9 5/8" 5K SOW Csg Head. d rams, choke line, manifold, super choke to 2500 pto 1500 psi f/30 minutes. rient 6" dir tools.
15:00 11:30 12:30 15H-1-4 15 100 15 100 15 100 16:00 16:00 17 100 17 100 18:00 18	4.50 16 TW E 216 Dur (hr) 4.00 2.00 2.50 3.50 3.00 2.50 2.00 2.00 6 TW B	07:00 STR S End Time 10:00 12:00 14:30 18:00 21:00 23:30 02:00 04:00 06:00 TR 1 End Time	11/4/2 Code 12 5 12 13 14 15 20 6 1/5/2(RUN CA COND N RUN CA WAIT O NIPPLE NIPPLE TEST B. DIRECT TRIPS D12 06	Catego COUNTY Catego ASING & CE MUD & CIRC ASING & CE N CEMENT UP B.O.P UP B.O.P O.P IONAL WO County Catego	11/5/201 Field Black ony EMENT C EMENT ORK 11/6/201 Field Black	Sweep him TOH. L/E 2 06:00 Name Ck Tail Ridge HSM. R/I jt casing, Bottom 4 C&C f/ cc HSM. Ce Superflus yld, 19.48 H2O. Wareturned bump plu Cement fi Lift riser, NUBOPE Test Bophigh, 250 Install we Tih. Tag of 2 06:00 Name k Tail Ridge	Well Status PRODUCING J Frank's Westates, r Float collar, 56 jts est couplings welded. The status well as follows: Find the status	Com In 9 5/8", 36#, J-55, ST&C Csg as follows: Float show and the state of the sta
15:00 11:30 12:30 15.11 15	4.50 16 TW E 216 Dur (hr) 4.00 2.50 2.50 2.50 2.00 2.00 6 TW B 216	07:00 STR S End Time 10:00 12:00 14:30 18:00 21:00 23:30 02:00 04:00 06:00 TR 1 End Time 07:00	11/4/2 Itate/Province Code 12 13 14 14 15 20 6 1/5/20 ate/Province Code 21	TRIPS 012 00 RUN CA COND M RUN CA WAIT O NIPPLE TEST B. DIRECT TRIPS D12 06	Catego COUNTY Catego ASING & CE MUD & CIRC ASING & CE N CEMENT UP B.O.P UP B.O.P O.P IONAL WO County Catego	11/5/201 Field Black ony EMENT C EMENT ORK 11/6/201 Field Black	Sweep him TOH. L/E 2 06:00 Name Ck Tail Ridge HSM. R/I jt casing, Bottom 4 C&C f/ cc HSM. Ce Superflus yld, 19.48 H2O. Wareturned bump plu Cement fi Lift riser, NUBOPE Test Bophigh, 250 Install we Tih. Tag of 2 06:00 Name k Tail Ridge	Well Status PRODUCING J Frank's Westates, r Float collar, 56 jts est couplings welded. The status well as follows: Find the status The status well as follows: Find	Com In 9 5/8", 36#, J-55, ST&C Csg as follows: Float show and the state of the sta
15:00 11:30 12:30 15H-1-4 15H-1-4 16:00 1:	4.50 16 TW E 216 Dur (hr) 4.00 2.00 2.50 3.50 3.00 2.50 2.00 2.00 6 TW B 216	07:00 STR S End Time 10:00 12:00 14:30 18:00 21:00 23:30 02:00 04:00 06:00 TR 1 End Time 07:00	11/4/2 Itate//Province Code 12 5 12 13 14 14 15 20 6 1/5/20 ate//Province Code	RUN CA WAIT O NIPPLE TEST B. DIRECT TRIPS D12 06	Catego COUNTY Catego ASING & CE MUD & CIRC ASING & CE N CEMENT UP B.O.P UP B.O.P O.P IONAL WO County Catego	11/5/201 Field Black ony EMENT C EMENT ORK 11/6/201 Field Black	Sweep him TOH. L/E 2 06:00 Name Ck Tail Ridge HSM. R/I jt casing, Bottom 4 C&C f/ cc HSM. Ce Superflus yld, 19.48 H2O. Wareturned bump plu Cement fi Lift riser, NUBOPE Test Bophigh, 250 Install we Tih. Tag of 2 06:00 Name k Tail Ridge	Well Status PRODUCING J Frank's Westates, r Float collar, 56 jts est couplings welded. The status well as follows: Find the status	Com In 9 5/8", 36#, J-55, ST&C Csg as follows: Float show and the state of the sta
5:00 11:30 2:30 5H-1-4 5H-1-4 7:00 1:00	4.50 16 TW E 216 Dur (hr) 4.00 2.50 2.50 2.50 2.00 2.00 6 TW B 216	07:00 STR S End Time 10:00 12:00 14:30 18:00 21:00 23:30 02:00 04:00 06:00 TR 1 End Time 07:00	11/4/2 Itate/Province Code 12 13 14 14 15 20 6 1/5/20 ate/Province Code 21	TRIPS 012 00 RUN CA COND M RUN CA WAIT O NIPPLE TEST B. DIRECT TRIPS D12 06	Catego COUNTY Catego ASING & CE MUD & CIRC ASING & CE N CEMENT UP B.O.P UP B.O.P O.P IONAL WO County Catego	11/5/201 Field Black ony EMENT C EMENT ORK 11/6/201 Field Black	Sweep him TOH. L/E 2 06:00 Name Ck Tail Ridge HSM. R/I jt casing, Bottom 4 C&C f/ cc HSM. Ce Superflus yld, 19.48 H2O. Wareturned bump plu Cement fi Lift riser, NUBOPE Test Bophigh, 250 Install we Tih. Tag of 2 06:00 Name k Tail Ridge	Well Status PRODUCING J Frank's Westates, r Float collar, 56 jts est couplings welded. The status well as follows: Find the status The status well as follows: Find	Com In 9 5/8", 36#, J-55, ST&C Csg as follows: Float show and the state of the sta

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Report Printed: 4/3/2013

B	Bill B	arret	t Co	rporation
Time Lo	g			
Start Time	Dur (hr)	End Time	Code	Category
07:30	4.00	11:30	2	DRILL ACTUAL
11:30	4.00	15:30	6	TRIPS
15:30	2.00	17:30	15	TEST B.O.P
17:30	3.00	20:30	6	TRIPS
20:30	6.00	02:30	2	DRILL ACTUAL
02:30	1.00	03:30	21	OPEN
03:30	2.00	05:30	2	DRILL ACTUAL
05:30	0.50	06:00	7	LUBRICATE RIG
5H-1-	46 TW E	TR 1	1/6/2	012 06:00 - 11

43-013-51216

Drill 2531' - 2810'. TOH, Bop drill. Test BOP. Test lower kelly valve, dart, safety, inside valves, hcr, pipe rams to 5000 psi high, 250 psi low. Install wear bushing. Tih. Drill/Slide 2810' - 3355'. Wob 15k, rpm 50/99, spp 2000 psi, dp 250 psi, rop 91 fph. Circulate gas out, raise mw f/9 ppg to 9.2 ppg. Drill/Slide 3355' - 3517'. Wob 15k, rpm47/99, gpm 585, spp 2200 psi, dp 250 psi, rop 81 Rig Service. 11/7/2012 06:00 API/UWI Well Status rimary Job Type State/Province otal Depth (ftKB) County 43-013-51216 11,918.0 Drilling & Completion Black Tail Ridge **PRODUCING** Time Log Com Start Time Dur (hr) End Time Code Category DRILL ACTUAL Drill/Slide 3517' - 5222'. Wob 22k, rpm 48/99, gpm 585, spp 2300 psi, dp 250 psi, rop 06:00 8.00 14:00 11/7/2012 06:00 - 11/8/2012 06:00 5H-1-46 TW BTR Primary Job Type API/UWI Mall Status Total Depth (ftKB) PRODUCING Black Tail Ridge 11,918.0 Drilling & Completion 43-013-51216 Time Log Code Start Time Dur (hr) End Time Category 06:00 11.50 17:30 DRILL ACTUAL Drill/Slide 5222' - 5697'. Wob 20k, rpm 48/99, gpm 585, spp 2300 psi, dp 250 psi, rop 42 fnh 17:30 0.50 18:00 LUBRICATE RIG Rig service. Drill/Slide 5697' - 6073'. Wob 20k, rpm 48/99, gpm 585, spp 2350 psi, dp 150 psi, rop 33 11.50 05:30 DRILL ACTUAL 18:00 inc 5.84*, Az 326.52 @ 6011' - 9.07' high and 4.07' right of plan 0.50 06:00 LUBRICATE RIG Rig Service. 05:30 Bop drill both tours 5H-1-46 TW BTR 11/8/2012 06:00 - 11/9/2012 06:00 11,918.0 Drilling & Completion 43-013-51216 Black Tail Ridge **PRODUCING** Time Log End Time | Code Category Dur (hr) Com Start Time Drill/Slide 6073' - 6641'. Survey @ 6579 5.58* inc. 322.79* az. MW 9.2#/gal 45 vis. 11.50 17:30 DRILL ACTUAL 06:00 Rig service, Function test BOP. 0.50 18:00 LUBRICATE RIG 17:30 Drill/slide 6641-7090'. Survey @ 7020 4.65* inc 270.18* az. MW 9.3#/gal 51 vis 18:00 10.00 04:00 DRILL ACTUAL 1.50 05:30 COND MUD & CIRC Circulate clean. Do flow check. Pump dryjob. 04:00 5 TRIPS 1.00 06:30 05:30 6 11/9/2012 06:00 - 11/10/2012 06:00 5H-1-46 TW BTR API/UW otal Deoth (ffKB) Primary Job Type Black Tail Ridge PRODUCING 11,918.0 Drilling & Completion 43-013-51216 Time Log Start Time Dur (hr) End Time Code Category 1.50 07:30 COND MUD & CIRC 4500 units gas. CIrc and condition. Raise mud wt to 9.4#/gal gas down to 500 units. Do 06:00 flow check. No flow. Pump dryjob. TOH, Laydown 6" collars. Reconfigure BHA for drilling curve. 07:30 10.50 18:00 6 TRIPS 5.00 23:00 TRIPS 18:00 6 Log in from 6800' with Gamma-Ray 20.00 19:00 23:00 DRILL ACTUAL Drlg/sliding 7090-7105', lost returns 19:00 1.00 20:00 Lost app 350 bbls. Pump lcm pill, build volume. Regained returns. Build volume and 5.00 01:00 COND MUD & CIRC 20:00 raise Icm content to 20%. 5H-1-46 TW BTR 11/10/2012 06:00 - 11/11/2012 06:00

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Black Tail Ridge

Well Status

PRODUCING

Total Depth (ftKB)

Primary Job Type

11,918.0 Drilling & Completion

(E)	Bill B	arre	tt Co	rpora	ation						
Time Lo	og										
Start Time		End Tim	ie Code		Category					Com	
06:00	12.00	18:00	2		DRILL ACTUAL		INC 276.	34 AZ. mw 9.5#/gal 4	6 vis.	2.3 fph. Survey @ 7350' MD 7276.41 TVD 27.04*	
18:00		18:30	7		CATE RIG		1 ~	ce, function test BOP.			
18:30	11.50	06:00	2	DRILL	ACTUAL			t 7508 MD, 7405.10 T bove line. M/W 9.7#/		94* inc 275.76 azi. +N/-S 691.76, +E/-W -554.21 s.	
5H-1	-46 TW E	3TR	11/11/ State/Provin		06:00 - 11	/12/201		Well Status		Total Depth (ftKB) Primary Job Type	
43-013-	51216		State/Provin	ice	County		e ail Ridge	PRODUCING		11,918.0 Drilling & Completion	
Time Lo								<u> </u>		<u> </u>	
Start Time		End Tim			Category	_	}			Com	
06:00	2.00	08:00	2	DRILL	DRILL ACTUAL				+. Cann	2' md (tvd 7450.56) 46.8* inc, 269.86 az. +N/-S not get weight to bit while sliding. Prep to TOH and	
08:00	7.50	15:30	5	COND	MUD & CIRC			oump LCM. Build volu oill. TOH to 6924'. Circ		ot LCM pill on bottom. Regained circ while is up.	
15:30	4.00	19:30	6	TRIPS				econfigure BHA.			
19:30	3.00	22:30	20	DIREC	TIONAL WORK		Reconfigure BHA. P/U new Smith FHI 20 (517x) Dir eq. 30 jts 4.5" 16.6# drillpipe. 42 jts 42# HWDP.				
22:30	1.00	23:30	9	CUT O	FF DRILL LINE		Slip & cut				
23:30	0.50	00:00	7	LUBRI	CATE RIG		Rlg servi	ce. Function test BOP	P.		
00:00	3.50	03:30	6	TRIPS			TIH to 68	24', filling every 15 st	ds.		
03:30	1.00	04:30	5	COND	MUD & CIRC		Circulate	and cut MW.			
l .	46 TW E	3TR				/13/201					
API/UWI 43-013-			State/Provin	ce	County	Field Nam Black T	e ail Ridge	Well Status PRODUCING		Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion	
Time Lo Start Time		End Time	e Code		Category					Com	
06:00		06:30	5	COND	MUD & CIRC		Circ and	cut MW back to 9.5#		Com	
06:30		08:00	3	REAMI			Wash & ream thru curve.				
08:00		01:00	2	DRILL	ACTUAL.		Drla slide	7669-7944' 275 in 17	7 hrs. Su	rvey @ 7905md (7619.94 tvd) 76.31* inc.	
							277.17* az Got sticky and having trouble getting wt to bit. Mix lube and EZ drill. Continue to work pipe and slide.				
01:00	0.50	01:30	7	LUBRIG	CATE RIG		Rig service, function test BOP				
01:30	4.50	06:00	2	DRILL	ACTUAL		Drill/slide 7944-8015 Survey @ 7905 76.31* inc 277.17 az +N/-S 710.64 +E/-w -882.22. MW 9.8#/gal 55 vis.				
	46 TW E				06:00 - 11					Total Depth (ftKB) Primary Job Type	
43-013-5			State/Provinc	ce	County	Field Nam Black T	e ail Ridge	Well Status PRODUCING		Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion	
Start Time		End Time	e Code	1	Category			·		Com	
06:00	3.00		2	DRILL.	ACTUAL		Drill/Slide	8015' - 8052'.			
09:00	1.50		5	COND	MUD & CIRC		C&C, swe	eep hole.			
10:30	7.00	17:30	6	TRIPS			Toh. Rea	med to 6900'.			
17:30	0.50	18:00	20	DIREC	TIONAL WORK		L/D Dir to	ols.			
18:00	12.00	06:00	3	REAMI	NG	_	P/U Bull r	nose hole opener, 2 re	eamers,	tih, Reaming as needed(F/7100' to TD).	
5H-1-	46 TW E	TR	11/14/	2012	06:00 - 11	/15/201	2 06:00)			
API/UWI 43-013-{	51216		State/Province	ce	County	Field Nam Black T	e ail Ridge	Well Status PRODUCING		Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion	
Time Lo	g									Com	

43-013-51216		State/FIOVIIIC	County	Black Tail Ridge	PRODUCING	11,918.0 Drilling & Completion	
Time Log]			- · · ·			
Start Time	Dur (hr)	End Time	Code	Category			Com
06:00	2.00	08:00	3	REAMING	Ream la	st 100' of hole.	
08:00	1.50	09:30	5	COND MUD & CIRC	C&C, sw	eep hole.	
09:30	1.50	11:00	6	TRIPS	Pump 12	stds out of hole to top	of curve. Pump slug, blow down kelly.
11:00	2.00	13:00	6	TRIPS	Lddp. Pr	agma broke.	
13:00	6.50	19:30	8	REPAIR RIG	Tripped i	nto shoe while repairing	g pragma.
19:30	0.50	20:00	7	LUBRICATE RIG	Rig Serv	ice.	
20:00	4.50	00:30	8	REPAIR RIG	Repair p	ragma.	
00:30	1.00	01:30	8	REPAIR RIG	Tih(caus	ed by downtime).	

E) Bill B	arre	tt Co	rporation							
				·							
Time Lo		T e- 4 =	e Code	1 0-1		1		Com			
Start Time 01:30		02:30	6	Category TRIPS		Com Lddp. Pulled reamer into rot rubber. Pulled bolts out of annular.					
02:30		06:00	8	REPAIR RIG	Repair and replace damage caused by running into rubber.						
		<u> </u>			14 01004	<u> </u>	<u>-</u>		-		
	46 TW E			<u> 2012 06:00 - 11</u>				Table David	(ftKB) Primary Job Type		
API/UWI 43-013-			State/Province	County	Field Nam Black T	e ail Ridge	Well Status PRODUCING	Total Depth	11,918.0 Drilling & Completion		
Time Lo Start Time		End Time	e Code	Category		T		Com			
06:00		10:00	8	REPAIR RIG		Repair flow line and dresser sleeve.					
10:00	1.00	11:00	12	RUN CASING & CEME	HSM. R/U Casers while working on flowline. Decided to make 2nd reamer trip, R/D Casers.						
11:00	19.00	06:00	8	REPAIR RIG	Install wear bushing. Tried to get rot head bearing off of reamer, couldn't(already had replacement reamer on the way). Rack & tally 4" DP & reamer assbly, tih to make 2nd reamer run. Out of the hole too long, Trip and subsequent reaming charged to Nabors. Light reaming to 7800'.						
5H-1-	46 TW E	TR	11/16/	2012 06:00 - 11	/17/201	2 06:00)				
API/UWI		T	State/Province	ce County	Field Nam		Well Status	Total Depth			
43-013-					Black T	ail Ridge	PRODUCING		11,918.0 Drilling & Completion		
Time Lo		End Time	Code	Coloner				Com			
06:00		08:00	8	REPAIR RIG		Finish rea	ming to 8052'. Double		. Hole sticky.		
08:00		10:00	8	REPAIR RIG		Sweep hole twice, C&C f/csg.					
		18:00	8	REPAIR RIG		Pump pipe out of curve to 6800', pump slug, toh.					
10:00		1		<u> </u>	Pull wear bushing. HSM. R/U Frank's to run 7", 26#, P-110, Lt&c csg. Details on next						
18:00	12.00	06:00	12	RUN CASING & CEME	V I	report.					
	46 TW E			<u> 2012 06:00 - 11</u>				Tracel Deville	(ftKB) Primary Job Type		
(PI/UWI 13-013-5	51216		State/Provinc	ce County	Field Nam Black Ta	e ail Ridge	Well Status PRODUCING	Total Depth	11,918.0 Drilling & Completion		
lime Lo					<u> </u>		•				
Start Time	Dur (hr)	End Time		Category				Com	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		
06:00		18:00	12	RUN CASING & CEMEI	Finish running 7", 26#, P-110 Csg as follows: Float shoe, 2 jts csg, float collar, 184 jts csg. Landed @ 7927'(125' short of td). R/D casers.						
18:00	5.00	23:00	12	RUN CASING & CEME	N I	HSM. R/U Halliburton cementers. Cement well as follows: Press test to 5000 psi. Pump 40 bbls superflush @ 10 ppg, 10 bbls H2O, mix and pump 225 bbls(545 sx) lead cmt @ 11 ppg, 2.32 yld, 10.61 gps H2O. mix and pump 87 bbls(345 sx) tail cmt @ 13.5 ppg, 1.42 yld, 6.65 gps H2O. Drop plug, wash up on plug. Pump 304 bbls mud @ 9.8 ppg. Max press 2200 psi(pressured up a couple times), final press 1400 psi. No returns throughout job. Bump plug to 2000 psi, floats held, bled back 2 bbls. R/D Halliburton.					
23:00	4.00	03:00	14	NIPPLE UP B.O.P		Break bottom flange, lift stack. Set slips on 7" csg, cut off, set weldment.					
03:00	2.00	05:00	14	NIPPLE UP B.O.P		NUBOP.					
05:00		06:00	15	TEST B.O.P		Test Blinds to 5000 psi/high, 250 psi/low. Test csg to 1500 psi for 30 minutes.					
	46 TW E	TR	11/18/	2012 06:00 - 11	/19/201						
PI/UWI		1	State/Province	ce County	Field Nam		Well Status	Total Depth			
3-013-5					Black Ta	ail Ridge	PRODUCING		11,918.0 Drilling & Completion		
ime Lo		1	1 0-3-	0-1		1		Com			
Start Time 06:00	Dur (hr)	End Time 07:00	Code 7	Category LUBRICATE RIG		Rig Service	ce - X/O I-Bop.	Com			
		l	120		RECTIONAL WORK		Rack and Tally Dir tools, P/U tools, make up bit.				
7:00		13:00	20				Tih. Tagged cmt @ 7775'.				
3:00		17:30	6	TRIPS							
7:30	12.50	06:00	5	COND MUD & CIRC	C&C mud, add spike fluid for 2% Kcl. Mud clabbered up, trying to break it back so we can pump it and drill.						
	46 TW E			2012 06:00 - 11							
PI/UWI 13-013-5	51216	(State/Provinc	ce County	Field Name Black Ta	e ail Ridge	Well Status PRODUCING	Total Depth	(ftKB) Primary Job Type 11,918.0 Drilling & Completion		
ime Lo					12.000				.,		
Start Time	Dur (hr)	End Time	Code	Category				Com			
6:00		07:00	5	COND MUD & CIRC		Finish building mud for horizontal section.					
7:00	6.50	13:30	21	OPEN		Drill cmt & fit equip. Clean out rathole to 7959'. Bit plugged.					
13:30	6.50	20:00	6	TRIPS		Toh, X/O bit, mm.					

Toh. X/O bit, mm.

6.50 20:00

13:30

6

TRIPS

Time Lo		1										
Start Time 20:00	me Dur (hr) End Time Code Category 5.00 01:00 6 TRIPS					ory	Com Tih. Start washing to bottom @ 7915'.					
01:00		06:00	21	OPEN			Clean out rathole to 8052'.					
		<u></u>		<u> </u>	00-00	44/04/00/						
5H-1-46 TW BTR 11/20/2012 06:00 - 11/21/201						11/21/201						
13-013-5			Glate/Floving		County		rail Ridge	PRODUCING		11,918.0 Drilling & Completion		
Time Log	Dur (hr)	End Tim	e Code	1	Catego	DIV	1			Com		
06:00		06:30	20	DIRECTIONAL WORK			Trouble shoot tools, had bad connection.					
06:30	10.50	17:00	2	DRILL ACTUAL			Drill/Slide 8052 - 8276'. Wob 10-25k, rpm 70/72, spp 2500 psi, dp 200 psi, rop 21 fph. 91.68*, 275.74 az @ 8203'. Bop Drill.					
17:00	0.50	17:30	7	LUBRICATE RIG			Rig Service.					
7:30	2.50	20:00	2	DRILL ACTUAL			Drill/Slide 8276' - 8339'. Wob 10-25k, rpm 70/72, spp 2500 psi, dp 200 psi, rop 25 fph. 94.61*, 273.87 az @ 8330'.					
20:00	2.00	22:00	20	DIRECTIONAL WORK			Work on Mwd computer.					
22:00	2.50	00:30	2	DRILL ACTUAL			Drill/Slide 8339' - 8390'. Wob 10-25k, rpm 70/72, spp 2500 psi, dp 200 psi, rop 25 fph. 94.80*, 273.87 az @ 8361'.					
00:30	1.00	01:30	7	LUBRICATE RIG		Rig Service. Work on top drive.						
01:30	4.50	06:00	2	DRILL ACTUAL			Drill/Slide 8390' - 8521'. Wob 10-25k, rpm 70/72, spp 2600 psi, dp 280 psi, rop 29 fph. 94.91*, 272.90 az @ 8393'. Bop Drill.					
5H-1-4	46 TW E	3TR	11/21/	2012	06:00 -	11/22/201	2 06:00)				
PI/UWI 3-013-5			State/Provinc	e	County	Field Nan Black 1	^{ne} Γail Ridge	Well Status PRODUCING		Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion		
ime Log		End Tim	e Code		Catego					Com		
06:00	Dur (hr) 9.00	15:00	2	DRILL	ACTUAL	ч	Drill/Slide	8521' - 8717'. 90.27*,	, 268.02	az, 1707.33 vs @ 8645'md/7594.66' tvd.		
5:00		15:30	7	LUBRICATE RIG			Rig Service.					
5:30		18:00	20	DIRECTIONAL WORK			Rebooting MWD computer.					
8:00		20:00	6	TRIPS			Pull into shoe to work on rig(brake sensors).					
0:00	7.50	03:30	8	REPAIR RIG			Troubleshoot /adjust SCR/Electrical brake resistor/chopper failure. Tih.					
3:30	1.00	04:30	20	DIRECTIONAL WORK			Troubleshoot connection to doghouse.					
4:30	1.50	06:00	2	L 1			Drill/Slide 8717' - 8749'.					
5H-1-4	46 TW E	RTR	11/22/	2012 (06:00 -	11/23/201	2 06:00	<u> </u>		- , , , , , , , , , , , , , , , , , , ,		
PI/UWI			State/Province		County	Field Nan		Well Status	1	Total Depth (ftKB) Primary Job Type		
3-013-5 ime Log			<u> </u>			Black 7	ail Ridge	PRODUCING		11,918.0 Drilling & Completion		
Start Time	Dur (hr)	End Tim			Catego	гу				Com		
6:00		14:00	2	DRILL ACTUAL		Drill/Slide 8749' - 8939'. 92.18*, 267.06 az, @ 8867'md/7591.57 tvd.						
4:00 5:00		15:00 16:30	21	COPEN COPEN			Rig Service. Adjust brake resistor. Standpipe and diff pressure too high. Rotate & reciprocate to free. Actuated I-Bop, cleared problem up.					
6:30	13.50	06:00	2	DRILL ACTUAL			Drill/Slide 8939' - 9318'. 92.86*, 269.72 az, @ 9214' md/7568' tvd29' high, 5' rt of plar					
	46 TW E	BTR			06:00 -	11/24/201						
PI/UWI 3-013-51	1216		State/Provinc	е	County	Field Nan	ail Ridge	Well Status PRODUCING		Total Depth (ftKB) Primary Job Type 11.918.0 Drilling & Completion		
ime Log						Diack	an Muge	I RODOGING		17,010.0 Drining & Completion		
tart Time	Dur (hr)	End Time	Code	1	Catego	ry				Com		
6:00		15:30	2	DRILL ACTUAL			Drill/Slide 9318' - 9507'. Having trouble getting weight to bit - increased lube, running lubra-bead sweeps.					
5:30	0.50	16:00	7	LUBRICATE RIG			Rig Service	Rig Service.				
6:00	2.00	18:00	2	DRILL A	ACTUAL		l l	9507' - 9539'. 93.83*,	, 272.46	az @ 9467'/7553.75'. 3.29' high, 19.29' right of		
							plan.					
8:00	1.00	19:00	5		MUD & CIRC		· ·	le, C&C f/trip.	_			
								Backream to shoe. Toh. L/D mm, bit.				
9:00		21:30 06:00	6	TRIPS								



API/UWI			State/Provin	ce	County	Field Nan		Well Status	Total Depth (ftKB) Primary Job Type
43-013-51:						Black 7	ail Ridge	PRODUCING	11,918.0 Drilling & Completion
ime Log	Dur (hr)	End Tim	ie Code	T	Catego		1	<u> </u>	Com
6:00		09:00	20	DIREC	TIONAL WOI		P/U new	mm, bit, dir tools. Orien	it tools.
9:00	2.00	11:00	6	TRIPS			Tih.		
1:00	1.00	12:00	21	OPEN			Cut and	slip drilling line.	
2:00	3.50	15:30	6	TRIPS			Finish tih	. Circ to bottom f/shoe.	
5:30	12.50	04:00	2	DRILL	ACTUAL		Drill/Slide	9539' - 9886'. Increase	ed lube to 4%.
4:00	0.50	04:30	7	LUBRIC	CATE RIG	·······	Rig Servi	ice.	
4:30	1.50	06:00	2	DRILL	ACTUAL		Drill/Slide 7500' TV	e 9886' - 9917'. 93.39*, 'D @ 3500' VS. 3.21' lov	268.59 az @ 9782'/7535.36', 2830 VS. Target # 5 - v, 3.34' right of plan.
	6 TW E	3TR		_		11/26/201			
PI/UWI 3-013-512	216		State/Provin	ce	County	Field Nam Black T	e ail Ridge	Well Status PRODUCING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
ime Log	210				1	Didok 1	an raage	T NOBOOM O	The tele Dilling a completion
tart Time	Dur (hr)	End Tim	e Code	1	Categor	у	1		Com
6:00	9.00	15:00	2	DRILL	ACTUAL		Drill/Slide excessive	e 9917' - 10183'. Double e torque trying to get to	e reaming every connection. Not able to slide - bottom, taking excessive weight.
5:00	1.50	16:30	5	COND	MUD & CIRC		Stand ba		ackream hole. Send 40 vis sweeps followed by 56 vis
6.30	0.50	17:00	17	LUBBIG	ATE DIO				
6:30			7	_	CATE RIG		Rig Servi		rakan failad
7:00		21:00	2		ACTUAL		1	2 10183' - 10219'. Rig b	
1:00	9.00	06:00	8	REPAIF	RIG		then high waiting o	vis sweep, cleared swe	e to circ and rotate, but can't pick up off bottom. Ran lo eep and kicked pump in and rotated twice an hour wh report time). 94.7*, 266.67 az, 3140.21' vs @ right of plan
H-1-4	6 TW E	TR	11/26/	2012	06:00 -	11/27/201	2 06:00	0	
PI/UWI			State/Province	ce	County	Field Nam		Well Status	Total Depth (ftKB) Primary Job Type
3-013-512	216					Black T	ail Ridge	PRODUCING	11,918.0 Drilling & Completion
ime Log	Dive (ba)	End Tim	e Code		Categor		_T		Com
6:00	Dur (hr) 3.50	09:30	8	REPAIR		<u> </u>	Wait on e	electrician. Repair brake	
9:30		10:00	3	REAMI				e, pump sweep.	
0:00		15:00	2		ACTUAL		l .	10219' - 10359'.	
5:00		15:30	7	_	ATE RIG		Rig Servi		
5:30		05:00	2		ACTUAL		1 -	10359' - 10644'.	
5:00		05:30	7		ATE RIG		Rig Servi		
5:30		06:00	2	DRILL A			Drill/Slide 6.98' left BOP drill	10644' - 10660'. 93.39	*, 266.67 az, 3572.9 vs @ 10540'/7481.17'81' high.
H-1-40	6 TW E	TR	11/27/	2012 (06:00 -	11/28/201	2 06:00	0	
7/UWI 3-013-512	216		State/Province	e	County	Field Nam Black T	e ail Ridge	Well Status PRODUCING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
								'	
me Log	D (b. a)	End Time			Categor	у		100001	Com
art Time	Dur (hr)	116:00	2	1	ACTUAL			10660' - 10927'.	
6:00	10.00			HUDDIC	ATE RIG		Rig Servi		
6:00 6:00	10.00 0.50	16:30 05:30	7	1	ACTUAL		1		*, 267.72 az, 4162.96' vs @ 11140'/7455.23' - 4.9' low
6:00 6:00 6:30	10.00 0.50 13.00	16:30		DRILL A	ACTUAL ATE RIG		5.58' left Rig Servi	of plan. ce.	*, 267.72 az, 4162.96' vs @ 11140'/7455.23' - 4.9' low
6:00 6:00 6:30 5:30	10.00 0.50 13.00 0.50	16:30 05:30 06:00	7	DRILL A	ATE RIG	11/20/201	5.58' left Rig Servi BOP drill	of plan. ce. both tours.	*, 267.72 az, 4162.96' vs @ 11140'/7455.23' - 4.9' low
6:00 6:00 6:00 6:30 6:30	10.00 0.50 13.00	16:30 05:30 06:00	7 11/28/	LUBRIC 2012 (ATE RIG	11/29/201	5.58' left Rig Servi BOP drill 2 06:00	of plan. ce. both tours.	
art Time 5:00 5:00 5:30 5:30 5H-1-46 PI/UWI 3-013-512	10.00 0.50 13.00 0.50	16:30 05:30 06:00	7	LUBRIC 2012 (ATE RIG	Field Nam	5.58' left Rig Servi BOP drill 2 06:00	of plan. ce. both tours.	*, 267.72 az, 4162.96' vs @ 11140'/7455.23' - 4.9' low Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
tart Time 6:00 6:00 6:30 5:30 5H-1-46 7//UW/ 3-013-512 ime Log	10.00 0.50 13.00 0.50 6 TW E	16:30 05:30 06:00 BTR	7 11/28/ State/Province	LUBRIC 2012 (ATE RIG 06:00 - County	Field Nam Black T	5.58' left Rig Servi BOP drill 2 06:00	of plan. ce. both tours. Well Status	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
6:00 6:00 6:30 5:30 5H-1-46 PI/UWI 3-013-512 ime Log	10.00 0.50 13.00 0.50 6 TW E	16:30 05:30 06:00 BTR	7 11/28/ State/Province	LUBRIC 2012 (ATE RIG 06:00 - County Category	Field Nam Black T	5.58' left Rig Servi BOP drill 2 06:00 e ail Ridge	of plan. ce. both tours. Well Status PRODUCING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion Com
Start Time 16:00 6:00 6:00 6:30 6:30 6:30 6:30 6:30	10.00 0.50 13.00 0.50 6 TW E	16:30 05:30 06:00 BTR	7 11/28/ State/Province	LUBRIC 2012 (O6:00 - County Categor	Field Nam Black T	5.58' left Rig Servi BOP drill 2 06:00 e ail Ridge	of plan. ce. both tours. Well Status PRODUCING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion

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E	Bill B	arret	tt Co	rporation					
Time L	og								
Start Time	Dur (hr)	End Time	Code	Category				Com	
10:00	11.50	21:30	2	DRILL ACTUAL		Drill/Slide	11314' - 11496'.		
21:30	0.50	22:00	7	LUBRICATE RIG		Rig Servi	ce.		
22:00	8.00	06:00	2	DRILL ACTUAL	_	Drill/Slide 11496' - 11653'. 94.97*, 268.65 az, 4533.81' vs @ 11518'/7435' - 6.98' low, 13.31' left of plan			
5H-1	46 TW E	3TR	11/29/	2012 06:00 - 11	/30/201	2 06:00)		
API/UWI 43-013-	51216		State/Provinc	ce County	Field Nam Black T	e ail Ridge	Well Status PRODUCING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion	
Time Lo					_				
Start Time	Dur (hr)	End Time		Category		D 31	44050L 44705 B 30	Com	
06:00	8.00	14:00	2	DRILL ACTUAL		9.6#/gal 5		ide. Survey @ 11708 94.9* inc, 265.16* az MW	
14:00	0.50	14:30	7	LUBRICATE RIG		Rlg Servi	ce, function test BOP.		
14:30	3.00	17:30	2	DRILL ACTUAL	-,	Drill 1178	5-11918'. (TVD 7403.41)MV	V 10.6#/gal 57 vis.	
17:30	2.00	19:30	5	COND MUD & CIRC	_	Mix and p	ump 2 wieghted pills. Pump	them around and pump 1 more bottoms up.	
19:30	2.00	21:30	6	TRIPS		POH to c	sg shoe pulling 35K over. Di	d not rotate or pump.	
21:30		22:30	5	COND MUD & CIRC	_	l	bottoms up and pump dryjol	· · · · · · · · · · · · · · · · · · ·	
22:30		01:00	6	TRIPS			D Dir equip and pickup rean		
01:00	1	03:00	20	DIRECTIONAL WORK	_	1	uipment. Function test BOF		
				l			diprilent. I dilotion tost Bot	<u>·</u>	
5H-1	46 TW E	BTR '	11/30/	2012 06:00 - 12	2/1/2012	06:00			
API/UWI 43-013-	51216	S	State/Provinc	ce County	Field Nam Black To	_e ail Ridge	Well Status PRODUCING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion	
Time Lo	<u> </u>								
Start Time		End Time	Code	Category		TOU.	(7000)	Com	
06:00		10:30	6	TRIPS		1	sg shoe (7920)		
10:30		11:30	5	COND MUD & CIRC			bottoms up @ 7920		
11:30	1.50	13:00	6	TRIPS		Trip in hol		to move DP @ 10900'. Rotate slowly and went	
13:00	0.50	13:30	5	COND MUD & CIRC		Circulate	bottoms up. Had 2800 units	trip gas.	
13:30	6.00	19:30	21	Pump fluid caliper		Mix red dy	ye and pump fluid caliper. Cotted flag volume shows nea	ould not see dye in returns. Mix LCM flag and try ar guage wellbore.	
19:30	2.50	22:00	6	TRIPS		TOH to cs	sa shoe. Pulled 30-50K over	. TIH rotated in from 11300'.	
22:00		23:30	5	COND MUD & CIRC		1	eep and circ 2 bottoms up. 4		
23:30		00:30	6	TRIPS		TOH for li	<u> </u>		
	46 TW E		<u> </u>	012 06:00 - 12/	2/2012 (
API/UWI			state/Provinc		Field Name		Well Status	Total Depth (ftKB) Primary Job Type	
43-013-5					Black Ta	ail Ridge	PRODUCING	11,918.0 Drilling & Completion	
Start Time	•	End Time	Code	Category		T		Com	
06:00		14:30	6	TRIPS			n liner. Stand back 58 std D o thru. L/D remaining drillpip	P 41 jts WWDP. Lay down 1 jt HWDP that rabbit pe	
14:30	8.00	22:30	12	RUN CASING & CEME	NT	2 jt shoe t	rack, float collar, landing col	Pickup 4 1/2" 11.6# P110 liner, Make up float shoe, llar, 1 jt, RSI sleeve. Then 112 jts. Fill and check rsa-flex liner hanger and rig down csg crew.	
22:30	7.50	06:00	12	RUN CASING & CEME	NT		pe etc from derrick filling an d picking up pup jts at report	d breaking circ every 10 stds. End of Liner @ time.	

Field Name Black Tail Ridge Well Status PRODUCING Primary Job Type 11,918.0 Drilling & Completion

5H-1-46 TW BTR 12/2/2012 06:00 - 12/3/2012 06:00

API/UWI 43-013-51216



Bill Barrett Corporation

Time Lo		I cas es	T 0	·	Cata		1		Com			
Start Time 06:00	Dur (hr) 14.00	End Time 20:00	Code 12	RUN CASIN	Category	Т	7020'. Bi N2. HSM side to 3 lead cmt 14.3 ppg web & al displaced disc in lin 8000#. In and circu	4.5" liner. Work to botto reak circulation and circo If Rig up cmt head etc. If 000#. Pump 40 bbl Tur (@14.3 ppg foamed to It. Wash pump & lines. It decide for liner followed ment Did not bump plug ner hanger. Allow 45 minflate packer. Do 80K of ulate cmt from liner top.	om. Bottom of lin culate 3 bottoms Pressure test cm ned Spacer 111 (12.5 ppg and 17. Drop drillpipe darl d by 71 bbls mud g Check floats. 1 inutes to fall. Pre- overpull test and r. Attempt to press	up. Move in a t and N2 lines 12ppg) then 7.72 bbl (50 sk: t. Displace as Caught wipe floats holding, ssure up to se release from lisure test liner.	nd rig up HES to 1000#, 1 6 bbls (215sl s) Elastiseal t follows 75 bbls proplug 67 bbls Drop 1.875" et liner hange iner top pull u	comt and est casing s) elastiseal ail cmt @ sls with cla- s into ball to shear . Sheared @ o to 6910'
20:00		03:00	13	WAIT ON C	EMENT			ell in and monitor presso f and check for flow. No		ssure 150# di	ue to heat exp	ansion.
03:00	3.00	06:00	6	TRIPS			LDDP.					
5H-1-	46 TW E	BTR '	12/3/2	012 06:0	0 - 12/4	/2012 (6:00					
491/UWI 43-013-5	1216	S	state/Province	e Cour	nty	Field Nam	e ail Ridge	Well Status PRODUCING	Total Depth		Primary Job Typ Drilling & Co	
Time Lo				L		Black II	all reage	THODOGING	<u> </u>	11,010.0	prining a oc	трюстот
Start Time	Dur (hr)	End Time	Code	TDISS	Category		1.000		Com		.1	
06:00		12:00	6	TRIPS	D O D			rell taking correct amoun				Dia
12:00		17:00	14	NIPPLE UP			released	and remove wear busl @ 1700 hrs.	ining and install n	ole cover. Pre	ep rig to move	. Rig
-	46 TW E			13 06:00					1=			
api/uwi 43-013-5	1216	S	state/Provinc	e Cour	nty	Field Name Black Ta	e ail Ridge	Well Status PRODUCING	Total Depth		Primary Job Typ Drilling & Co	
								1		,		
	g											
Time Lo	Dur (hr)	End Time 06:00	Code	Install Wellh	Category			HECK PRESSURES. NI IRE TEST VOID. GOOI			K TBG HEAD).
Time Lo Start Time 06:00	Dur (hr) 24.00	06:00	IWHD		ead	013 06:	PRESSU		D NIGHT CAP. II		K TBG HEAD).
Start Time 06:00 5H-1-	Dur (hr) 24.00	06:00 BTR 2	IWHD	13 06:00	ead - 2/3/2(Field Name	PRESSU		D NIGHT CAP. II	AP.	Primary Job Typ	9
Time Lo. Start Time 06:00 5H-1- API/UWI 43-013-5 Time Lo.	Dur (hr) 24.00 46 TW E	06:00 BTR 2	IWHD 2/2/20 itate/Province	13 06:00	- 2/3/20	Field Name	PRESSU	JRE TEST VOID. GOOD	D NIGHT CAP. II D. NU NIGHT CA	AP.	Primary Job Typ	9
Start Time Logical Start Time Co. Start Time Co. Start Time Logical St	Dur (hr) 24.00 46 TW E 1216 9 Dur (hr)	06:00 BTR 2	IWHD 2/2/20	13 06:00	ead - 2/3/2(Field Name	PRESSU 00 e ail Ridge RU SLB.	JRE TEST VOID. GOOD	D NIGHT CAP. II D. NU NIGHT CA Total Depth Com 4-1/2" LINER TOI	(ffKB) 11,918.0 P AT 7007'. S	Primary Job Typ Drilling & Co	mpletion
Time Lo. Start Time 06:00 5H-1- API/UWI 43-013-5 Time Lo. Start Time 06:00	Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 24.00	06:00 BTR 2 S End Time 06:00	IWHD 2/2/20 tate/Province Code LOGG	13 06:00 e Coun	- 2/3/2(tty Category	Field Name Black Ta	PRESSU PRESSU	Well Status PRODUCING RIH W/ 3.63" GR/JB. 4	D NIGHT CAP. II D. NU NIGHT CA Total Depth Com 4-1/2" LINER TOI	(ffKB) 11,918.0 P AT 7007'. S	Primary Job Typ Drilling & Co	mpletion
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Start Time	Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 24.00	O6:00 BTR 2 End Time O6:00 BTR 2 S End Time	Z/2/20 tate/Provinc Code LOGG LOGG tate/Provinc	13 06:00 e	- 2/3/20 tty Category 0 - 2/14	Field Name Black Ta	PRESSU PRESSU ail Ridge RU SLB. AT 6900' OVER. Pail Ridge	Well Status PRODUCING RIH W/ 3.63" GR/JB. 4 2.3.44* ICL, PULLING 2	D NIGHT CAP. II D. NU NIGHT CA Total Depth Com 4-1/2" LINER TOI 250# OVER AS S	(fikb) 11,918.0 P AT 7007'. S START POOH	Primary Job Typ Drilling & Co TART STACH I. RD SLB AN	mpletion KING OUT D MOVE
Start Time	Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 1.00	06:00 BTR 2 End Time 06:00 BTR 2 End Time 07:00	Z/2/20 tate/Provinc Code LOGG 2/13/2 tate/Provinc Code CTRL	13 06:00 e	- 2/3/20 tty Category 0 - 2/14	Field Name Black Ta	PRESSU PRESSU ail Ridge RU SLB. AT 6900' OVER. Price of the state of the stat	Well Status PRODUCING RIH W/ 3.63" GR/JB. 4 2.3.44* ICL, PULLING 2 Well Status PRODUCING	D NIGHT CAP. II D. NU NIGHT CA Total Depth Com 4-1/2" LINER TOI 250# OVER AS S	(fikb) 11,918.0 P AT 7007'. S START POOH	Primary Job Typ Drilling & Co TART STACH I. RD SLB AN	mpletion KING OUT D MOVE
Start Time	Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 1.00 1.00	06:00 BTR 2 End Time 06:00 End Time 07:00 08:00	Code LOGG LOGG Code COde CTRL RMOV	13 06:00 Coun Logging 013 06:00 Coun Crew Travel Rig Move	- 2/3/20 tty Category 0 - 2/14 tty Category	Field Name Black Ta	PRESSU PRESSU ail Ridge RU SLB. AT 6900' OVER. Provided in Ridge CREW TROAD R	Well Status PRODUCING RIH W/ 3.63" GR/JB. 4 2.3.44* ICL, PULLING 2 Well Status PRODUCING RAVEL. IG FROM 13H-33-46 To	D NIGHT CAP. II D. NU NIGHT CA Total Depth Com 4-1/2" LINER TOI 250# OVER AS S Total Depth Com	AP. (ffKB) 11,918.0 P AT 7007'. S START POOH (ffKB) 11,918.0	Primary Job Typ Drilling & Co TART STACH I. RD SLB AN	mpletion KING OUT D MOVE
Time Loc Start Time 206:00 5H-1	Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 1.00 1.00 2.50	06:00 BTR 2 End Time 06:00 BTR 2 End Time 07:00 08:00 10:30	Code LOGG LOGG Code CTRL RMOV GOP	Logging Coun Crew Travel Rig Move General Ope	- 2/3/20 tty Category Category Category Category	Field Name Black Ta	PRESSU OO pail Ridge RU SLB. AT 6900' OVER. OCENT CREW T ROAD R SPOT IN	Well Status PRODUCING RIH W/ 3.63" GR/JB. 4 2.3.44* ICL, PULLING 2 Well Status PRODUCING	D NIGHT CAP. II D. NU NIGHT CA Total Depth Com 4-1/2" LINER TOI 250# OVER AS S Total Depth Com	AP. (ffKB) 11,918.0 P AT 7007'. S START POOH (ffKB) 11,918.0	Primary Job Typ Drilling & Co TART STACH I. RD SLB AN	mpletion KING OUT D MOVE
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Start Time	Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 1.00 1.00 2.50 1.00	06:00 BTR 2 End Time 06:00 BTR 2 End Time 07:00 08:00 10:30	Code LOGG LOGG Code CTRL RMOV GOP	Logging Coun Crew Travel Rig Move General Ope	- 2/3/20 tty Category Category Category category	Field Name Black Ta	PRESSU OO en ail Ridge RU SLB. AT 6900' OVER. OCENT CREW T ROAD R SPOT IN RUSU. ND NIGH	Well Status PRODUCING RIH W/ 3.63" GR/JB. 4 2.3.44* ICL, PULLING 2 Well Status PRODUCING RAVEL. IG FROM 13H-33-46 To	D NIGHT CAP. II D. NU NIGHT CA Total Depth Com 4-1/2" LINER TOI 250# OVER AS S Total Depth Com O LOCATION. MEN TO BE SET	(ffKB) 11,918.0 P AT 7007'. S START POOH (ffKB) 11,918.0	Primary Job Typ Drilling & Co TART STACH RD SLB AN Primary Job Typ Drilling & Co	mpletion KING OUT D MOVE mpletion
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Start Time	Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 1.00 1.00 2.50 1.00 3.00	End Time 07:00 08:00 10:30 14:30 18:30 06:00	Code LOGG Code CTRL RMOV GOP SRIG BOPI RUTB	Logging Logging Crew Travel Rig Move General Ope Rig Up/Down Install BOP's	- 2/3/20 tty Category O - 2/14 tty Category erations n s ad & Secure	Field Name Black Ta	PRESSU OO ail Ridge RU SLB. AT 6900' OVER. OCENT ROAD R SPOT IN RUSU. ND NIGH HEAD. R MU 6-1/8 5667'. SE CREW T	Well Status PRODUCING RIH W/ 3.63" GR/JB. 4 2.3.44* ICL, PULLING 2 Well Status PRODUCING RAVEL. IG FROM 13H-33-46 TG RIG. WAIT ON DEAD! AT CAP. NU 7" 5 X 7" 1 2U FLOOR. SPOT IN CAP. BIT, BIT, SUB, 1 JT, 2 DFN.	D NIGHT CAP. II D. NU NIGHT CA Total Depth Com 4-1/2" LINER TOI 250# OVER AS S Total Depth Com O LOCATION. MEN TO BE SET IO SPOOL, BOP. ATWALK AND P 2.31 XN. RIH AS	MEAS AND F	Primary Job Typ Drilling & Co TART STACH I. RD SLB AN Primary Job Typ Drilling & Co	mpletion KING OUT D MOVE mpletion STRIPPING G.
Time Losstart Time D6:00 5H-1	Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 1.00 2.50 1.00 3.00 4.00 11.50	End Time 07:00 08:00 11:30 14:30 06:00 ETR 2	Code LOGG Code CTRL RMOV GOP SRIG BOPI RUTB	Logging Crew Travel Rig Move General Ope Rig Up/Down Install BOP's Run Tubing Lock Wellhe 013 06:00	Category Catego	Field Name Black Ta	PRESSU OO ail Ridge RU SLB. AT 6900' OVER. OCENT ROAD R SPOT IN RUSU. ND NIGH HEAD. R MU 6-1/8 5667'. SE CREW T	Well Status PRODUCING RIH W/ 3.63" GR/JB. 4 7.3.44* ICL, PULLING 2 Well Status PRODUCING Well Status PRODUCING RAVEL. IG FROM 13H-33-46 TO RIG. WAIT ON DEAD! HT CAP. NU 7" 5 X 7" 1 RU FLOOR. SPOT IN CAP. SPOT	D NIGHT CAP. II D. NU NIGHT CA Total Depth Com 4-1/2" LINER TOI 250# OVER AS S Total Depth Com O LOCATION. MEN TO BE SET IO SPOOL, BOP. ATWALK AND P 2.31 XN. RIH AS	(fikb) 11,918.0 P AT 7007'. S START POOH (fikb) 11,918.0 MUD CROSS IPE RACKS. I	Primary Job Typ Drilling & Co TART STACH RD SLB AN Primary Job Typ Drilling & Co S, ANNULAR MOVE IN TBO PU 176-JTS T	STRIPPING STRIPPING STRIPPING STRIPPING STRIPPING
Time Losstart Time 106:00 Start Time 106:00 Start Time 206:00 Start Time 206:00	Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 1.00 1.00 2.50 1.00 3.00 4.00 4.00 46 TW E	End Time 07:00 08:00 11:30 14:30 06:00 ETR 2	Code LOGG Code LOGG CODE CTRL RMOV GOP SRIG BOPI RUTB LOCL	Logging Crew Travel Rig Move General Ope Rig Up/Down Install BOP's Run Tubing Lock Wellhe 013 06:00	Category Catego	Field Name Black Ta	PRESSL OO ail Ridge RU SLB. AT 6900' OVER. OE: OO CREW T ROAD R SPOT IN RUSU. ND NIGHHEAD. R MU 6-1/8 5667'. SE CREW T	Well Status PRODUCING RIH W/ 3.63" GR/JB. 4 2.3.44* ICL, PULLING 2 Well Status PRODUCING Well Status PRODUCING RAVEL. IG FROM 13H-33-46 TO RIG. WAIT ON DEAD! HT CAP. NU 7" 5 X 7" 1 EU FLOOR. SPOT IN CAP. WELL SHUT III	D NIGHT CAP. II D. NU NIGHT CAP Total Depth Com 4-1/2" LINER TOI 250# OVER AS S Total Depth Com O LOCATION. MEN TO BE SET IO SPOOL, BOP. ATWALK AND P 2.31 XN. RIH AS N AND SECURE	(fikb) 11,918.0 P AT 7007'. S START POOH (fikb) 11,918.0 MUD CROSS IPE RACKS. I	Primary Job Typ Drilling & Co TART STACH RD SLB AN Primary Job Typ Drilling & Co S, ANNULAR, MOVE IN TBO	STRIPPING STRIPPING STRIPPING STRIPPING STRIPPING STRIPPING STRIPPING
Time Los Start Time 06:00 Start Time 106:00 Start Time Los Start Time Los Start Time 106:00 Start Time Los Start Time 106:00 Start Time 10	Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 24.00 46 TW E 1216 9 Dur (hr) 1.00 1.00 2.50 1.00 3.00 4.00 11.50 46 TW E	End Time 07:00 08:00 11:30 14:30 06:00 ETR 2	Code LOGG Code LOGG CODE CTRL RMOV GOP SRIG BOPI RUTB LOCL	Logging Crew Travel Rig Move General Ope Rig Up/Down Install BOP's Run Tubing Lock Wellhe 013 06:00	Category	Field Name Black Ta	PRESSU OO ail Ridge RU SLB. AT 6900' OVER. OCENT ROAD R SPOT IN RUSU. ND NIGH HEAD. R MU 6-1/8 5667'. SE CREW T	Well Status PRODUCING RIH W/ 3.63" GR/JB. 4 2.3.44* ICL, PULLING 2 Well Status PRODUCING RAVEL. IG FROM 13H-33-46 TG IRIG. WAIT ON DEAD! AT CAP. NU 7" 5 X 7" 1 2U FLOOR. SPOT IN CAP. BIT, BIT SUB, 1 JT, 2 DFN. RAVEL. WELL SHUT II Well Status PRODUCING	D NIGHT CAP. II D. NU NIGHT CAP Total Depth Com 4-1/2" LINER TOI 250# OVER AS S Total Depth Com O LOCATION. MEN TO BE SET IO SPOOL, BOP. ATWALK AND P 2.31 XN. RIH AS N AND SECURE	(fikb) 11,918.0 P AT 7007'. S START POOH (fikb) 11,918.0 MUD CROSS IPE RACKS. I	Primary Job Typ Drilling & Co TART STACH RD SLB AN Primary Job Typ Drilling & Co S, ANNULAR MOVE IN TBO PU 176-JTS T	STRIPPING STRIPPING STRIPPING STRIPPING STRIPPING STRIPPING STRIPPING

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Time Lo	Dur (hr)	End Time	Code	Category				Com	
7:00		08:00	RUTB	Run Tubing					7/8" TBG. TAG TOP OF LINEF
8:00	2.50	10:30	СТИ	Clean Out	L	LAY PMF		LEAN WITH 250	BBLS. HAD HEAVY THICK G
					1-		IN RETURNS.		
0:30		12:30	PULT	Pull Tubing			// 220-JTS 2-7/8" TBG. LD 6		
2:30	2.50	15:00	RUTB	Run Tubing	ļт	TBG. X-C		2-7/8" TBG. WE	NIPPLE, RIH AS PU 19-JTS 2 ENT THRU 4-1/2" LT AT 6998' BIT. (40* INC)
5.00	4.00	10.00	СТИ	Class Out					JDGE THEN CAME CLEAN.
5:00 5:00		16:00 18:00	PULT	Clean Out Pull Tubing			// 219-JTS 2-7/8" TBG AND		
			<u> </u>	013 06:00 - 2/16/			11 2 13-0 10 2-110 TBO AND	20-310 2-3/0 : E	
PI/UWI	46 I VV E		ZI 1 DI Z		IField Name	טטיכ	Well Status	Total Depth (ftKB)	Primary Job Type
3-013-5	1216		state/FIOVIIIC	e County	Black Tail	Ridge	PRODUCING		11,918.0 Drilling & Completion
ime Lo	g				•				
tart Time	Dur (hr)	End Time	1	Category		ODEW T	DAVEW	Com	
6:00		07:00	CTRL	Crew Travel	1	CREW TI		D 4 IT 0 2/0" TE	BG, XN NIPPLE, 5-JTS 2-3/8"
7:00	3.00	10:00	RUTB	Run Tubing	T				/2" LT AT 6998' AND SET PKI
0:00	1.00	11:00	PTST	Pressure Test		PRES TE BLEED C		R LAP TO 2000 P	SI FOR 15 MIN. GOOD TEST
1:00		14:00	PULT	Pull Tubing	1		E PKR. POOH AS LD 2-7/8		2-3/8" AND PKR.
4:00	3.50	17:30	LOGG	Logging	L (7 R	LOG FRO (7") LT - 3 RD SLB.	3948" FAIR. TOC AT 3948'.	R. 7480' TO LINE RD SLB. RD TB	RTOP AT 6998' FAIR TO RAT G EQUIP.
17:30		18:00	GOP	General Operations			EQUIP. SECURE WELL FO		
8:00	12.00	06:00	LOCL	Lock Wellhead & Secure	C	CREW TI	RAVEL. WELL SECURE FO	OR NIGHT	
0.00							NAVEL. WELL GEOORET		
	46 TW E	TR 2	2/16/2	013 06:00 - 2/17/2	2013 06		NAVEL: WELL GLOOKE I		
5H-1-4			2/16/20 state/Province		Field Name	6:00	Well Status	Total Depth (ftKB)	
5H-1-4 PI/UWI 13-013-5	1216					6:00		Total Depth (ftKB)	Primary Job Type 11,918.0 Drilling & Completion
5H-1-4 PI/UWI 13-013-5 Time Log	1216	S	tate/Provinc	e County	Field Name	6:00	Well Status	Total Depth (ftKB)	
5H-1-4 PI/UWI 3-013-5 ime Log	1216 Dur (hr)				Field Name Black Tail	6:00	Well Status PRODUCING	Total Depth (ftKB)	
	1216 g Dur (hr) 1.00	End Time	Code CTRL GOP	e County Category	Field Name Black Tail	Ridge CREW TR SICP 0. X JTS 4-1/3	Well Status PRODUCING RAVEL COUT PIPE RAMS, MOVE '2" 11.6# P-110 CSG, MIRU	Com CATWALK AND WEATHERFOR	11,918.0 Drilling & Completion RACKS FOR CSG. UNLOAD D CSG CREW.
5H-1-4 PI/UWI 13-013-5 Time Log Start Time 16:00 17:00	1216 g Dur (hr) 1.00 3.50	End Time 07:00	Code CTRL	Category Crew Travel	Field Name Black Tail	GREW TR SICP 0. X JTS 4-1/2 ISM. MU SICREW I SOCID. CSG DET (B I-1/2" PU I-1/2" PU	Well Status	COM CATWALK AND WEATHERFOR H WITH 4-1/2", LA	11,918.0 Drilling & Completion RACKS FOR CSG. UNLOAD D CSG CREW. 11.6#, P-110 CSG MADE UP AND IN 40K COMPRESSION. LUS TO 2000 PSI FOR 15 MIN
5H-1-4 PI/UWI 3-013-5 Time Log Start Time 16:00 17:00 0:30	1216 g Dur (hr) 1.00 3.50 6.00	End Time 07:00 10:30	Code CTRL GOP	Category Crew Travel General Operations	Field Name Black Tail	S:00 I Ridge CREW TF SICP 0. X JTS 4-1/: HSM. MU 3020#. S' SCREW I SOLID. CSG DET (B HANGER 40K COW 1-1/2" PU 1-1/2" SETTI	Well Status	Com CATWALK AND WEATHERFOR H WITH 4-1/2", PACE OUT TO LA ES TEST ANNUL	11,918.0 Drilling & Completion RACKS FOR CSG. UNLOAD D CSG CREW. 11.6#, P-110 CSG MADE UP AND IN 40K COMPRESSION. LUS TO 2000 PSI FOR 15 MIN
5H-1-4 PI/JWI 3-013-5 Time Log Start Time 16:00 77:00 0:30	1216 Dur (hr) 1.00 3.50 6.00	End Time 07:00 10:30 16:30	Code CTRL GOP RUTB	Category Crew Travel General Operations Run Tubing	Field Name Black Tail	Ridge CREW TF SICP 0. X JTS 4-1/2 SOCID. CSG DET KB HANGER 40K COW 1-1/2" PU 1-1/2"	Well Status	Com CATWALK AND WEATHERFOR H WITH 4-1/2", PACE OUT TO LA ES TEST ANNUL	11,918.0 Drilling & Completion PRACKS FOR CSG. UNLOAD D CSG CREW. 11.6#, P-110 CSG MADE UP AND IN 40K COMPRESSION. LUS TO 2000 PSI FOR 15 MIN
5H-1-4 PPI/UVI 3-013-5 ime Log itart Time 6:00 7:00 0:30 6:30	1216 Dur (hr) 1.00 3.50 6.00	End Time 07:00 10:30 16:30	Code CTRL GOP RUTB	Category Crew Travel General Operations Run Tubing General Operations O13 06:00 - 2/18/2	Field Name Black Tail C S S C K H 4 4 1 1 4 4 7 Field Name	Ridge CREW TF SICP 0. X JTS 4-1/2 SOCREW IF SOCID. CSG DET KB HANGER 40K COM 1-J1/2" PU 1-J1/2" PU 1-J1/2" PU 1-J7-JTS 4-1 1-7-JTS 4-1 1-1/2" PU 1-1/2" PU 1-1/2" PU 1-1/2" PU 1-1/2" PU 1-1/3"	Well Status	Com CATWALK AND WEATHERFOR H WITH 4-1/2", PACE OUT TO LA ES TEST ANNUL 11.81' STUNG IN R. MOVE CATW	11,918.0 Drilling & Completion PRACKS FOR CSG. UNLOAD D CSG CREW. 11.6#, P-110 CSG MADE UP AND IN 40K COMPRESSION. LUS TO 2000 PSI FOR 15 MIN NTO PBR) VALD AND RACKS. DRAIN EG
6:30 6:30 6:30 6:30 6:30	1216 Dur (hr) 1.00 3.50 6.00 1.50	End Time 07:00 10:30 16:30	Code CTRL GOP RUTB	Category Crew Travel General Operations Run Tubing General Operations O13 06:00 - 2/18/2	Field Name Black Tail	Ridge CREW TF SICP 0. X JTS 4-1/2 SOCREW IF SOCID. CSG DET KB HANGER 40K COM 1-J1/2" PU 1-J1/2" PU 1-J1/2" PU 1-J7-JTS 4-1 1-7-JTS 4-1 1-1/2" PU 1-1/2" PU 1-1/2" PU 1-1/2" PU 1-1/2" PU 1-1/3"	Well Status	Com CATWALK AND WEATHERFOR H WITH 4-1/2", PACE OUT TO LA ES TEST ANNUL 11.81' STUNG IN R. MOVE CATW	11,918.0 Drilling & Completion PRACKS FOR CSG. UNLOAD D CSG CREW. 11.6#, P-110 CSG MADE UP AND IN 40K COMPRESSION. LUS TO 2000 PSI FOR 15 MIN NTO PBR)
5H-1-4 PI/JWI 3-013-5 ime Log start Time 6:00 7:00 0:30 6:30 5H-1-4 PI/JWI 3-013-5 ime Log	1216 Dur (hr) 1.00 3.50 6.00 1.50 46 TW B	End Time 07:00 10:30 16:30 18:00	Code CTRL GOP RUTB	Category Crew Travel General Operations Run Tubing General Operations O13 06:00 - 2/18/2	Field Name Black Tail C S S C K H 4 4 1 1 4 4 7 Field Name	Ridge CREW TF SICP 0. X JTS 4-1/2 SOCREW IF SOCID. CSG DET KB HANGER 40K COM 1-J1/2" PU 1-J1/2" PU 1-J1/2" PU 1-J7-JTS 4-1 1-7-JTS 4-1 1-1/2" PU 1-1/2" PU 1-1/2" PU 1-1/2" PU 1-1/2" PU 1-1/3"	Well Status	COM CATWALK AND WEATHERFOR IH WITH 4-1/2", PACE OUT TO LA ES TEST ANNUL 11.81' STUNG IN R. MOVE CATW	11,918.0 Drilling & Completion PRACKS FOR CSG. UNLOAD D CSG CREW. 11.6#, P-110 CSG MADE UP AND IN 40K COMPRESSION. LUS TO 2000 PSI FOR 15 MIN NTO PBR) VALD AND RACKS. DRAIN EG
5H-1-4 PPI/UWI 13-013-5 Fime Log Start Time 106:00 17:00 0:30	1216 Dur (hr) 1.00 3.50 6.00 1.50 46 TW B	End Time 07:00 10:30 16:30	Code CTRL GOP RUTB	Category Crew Travel General Operations Run Tubing General Operations O13 06:00 - 2/18/2	Field Name Black Tail CC SS CC KR H4 44 41 11 H R S 2013 06 Field Name Black Tail	Ridge CREW TF SICP 0. X JTS 4-1/2 SOCREW IF SOCID. CSG DET KB HANGER 40K COM 1-J1/2" PU 1-J1/2" PU 1-J1/2" PU 1-J7-JTS 4-1 1-7-JTS 4-1 1-1/2" PU 1-1/2" PU 1-1/2" PU 1-1/2" PU 1-1/2" PU 1-1/3"	Well Status	Com CATWALK AND WEATHERFOR H WITH 4-1/2", PACE OUT TO LA ES TEST ANNUL 11.81' STUNG IN R. MOVE CATW	11,918.0 Drilling & Completion PRACKS FOR CSG. UNLOAD D CSG CREW. 11.6#, P-110 CSG MADE UP AND IN 40K COMPRESSION. LUS TO 2000 PSI FOR 15 MIN NTO PBR) VALD AND RACKS. DRAIN EG

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-/4/4	<i>.</i> *		tt Co	•							
Time Lo	oa										
Start Time	Dur (hr)	End Tin			Category					Com	
09:00		0 09:30	SRIG	Rig Up/			RDSU.				
09:30	20.5	06:00	GOP	1	Operations		1	Y UNDER CONSTRUC	CTION. RE	EADY TO OPEN RSI	.
5H-1	-46 TW	BTR	2/18/2	013 0	6:00 - 2/°	19/2013	06:00				
API/UWI 43-013-	51216		State/Provin	ce	County	Field Nan		Well Status PRODUCING	To	tal Depth (ftKB)	Primary Job Type Drilling & Completion
Time Lo						Black	ail Ridge	PRODUCING		11,910.0	Drilling & Completion
Start Time		End Tim	ne Code	T	Category					Com	
06:00	24.00	06:00	GOP	General	Operations		BATTER	Y UNDER CONSTRUC	CTION		
5H-1	-46 TW	BTR	2/19/2	013 00	3:00 - 2/2	20/2013	06:00				
API/UWI			State/Province	ce	County	Field Nam		Well Status	To	tal Depth (ftKB)	Primary Job Type
43-013- Fime L o						Black T	ail Ridge	PRODUCING		11,918.0	Drilling & Completion
Start Time		End Tim	e Code	1	Category		1			Com	
06:00		06:00	GOP	General	Operations		BATTER	Y UNDER CONSTRUC	CTION		
5H-1	-46 TW	BTR	2/20/2	013 06	5:00 - 2/2	21/2013	06:00				
API/UWI			State/Province		County	Field Nam	e	Well Status	To	tal Depth (ftKB)	Primary Job Type
43-013-						Black T	ail Ridge	PRODUCING		11,918.0	Drilling & Completion
Time Lo Start Time	~	End Tim	ie Code	T	Category		T			Com	
06:00	• • • • • • • • • • • • • • • • • • • 	06:00	GOP	General	Operations		BATTER	Y UNDER CONSTRUC	CTION.	25	
5H-1-	46 TW	BTR	2/21/2	013 06	5:00 - 2/2	22/2013	6:00				
API/UWI	70 1 11	5 111	State/Province		County	Field Nam		Well Status	Tot	tal Depth (ftKB)	Primary Job Type
3-013-					•	Black T	ail Ridge	PRODUCING		11,918.0	Drilling & Completion
Time Lo		T = 1 = 1	1 0 1								
Start Time 06:00		End Tim 0 08:00	e Code GOP	General	Category Operations		MIRU HE	S AND SLB WITH 2 W	VT BARS A	Com AND 4-1/2" HES DUI	MMY PLUG HSM
08:00	2.00	10:00	ACID	Acid Wa	sh/Squeeze		SHUT IN 3116 PSI AT 6100 CAME DO WITH 15	. START ACID. RATE PSI THEN COME DOV	CSG. PMF 5.9 BPM A WN TO 48: ITEMPT T AD PRES S	P 2 BPM TO START AT 4190 PSI. ACID (22 PSI. RATE 9.6 BI O GET 10+ BPM BU SPIKE TO 7200 PSI.	PUMPING INTO RSI AT GONE. RATE AT 7 BPM PM AT 5956 PSI THEN JT PUMP WOULD HOLD.
0:00	3.00	13:00	WLWK	Wireline			GREASE -O CCL. I SLB CBL 2500 PSI MOVING AT 74* AI LINE. NO	EQUALIZE AND OPEN LOG TO TIE IN TO LT - 6 BPM AT 2780. GO AT 7878'. SHUT DOW NGLE OF HEEL WOF	ORK THR N WELL. R T AT 6996' O TO 8 BPN VN PUMPS RK LINE. N ALVE QUI	U THEN CCL NOT IN W/ 4-1/2" DUMM START PUMPING TOOLS UNABLE TO CON NO CHANGE. FLOW CK. TOOLS CAME I	WORKING. POOH AND : Y PLUG. CORALATE TO WITH HES AT 2 BPM A
3:00	17.00	06:00	LOCL	Lock We	ellhead & Secu	re	WELL SH	IUT IN WAITING ON C	COIL TBG.		
5H-1-	46 TW I	3TR	2/22/2	013 06	:00 - 2/2	23/2013 (06:00				
PI/UWI			State/Provinc	e	County	Field Nam		Well Status	Tot	al Depth (ftKB)	Primary Job Type
3-013-5		i				Black T	ail Ridge	PRODUCING		11,918.0	Drilling & Completion
ime Lo tart Time	-	End Time	e Code	1	Category		1			Com	
6:00		20:00	GOP	General	Operations		WAITING	ON COIL FROM TW	WELL.		
0:00	6.00	02:00	СТИ	Clean O	ut		TO 4000.		H. CIRC A	S RIH TO RSI AT 1	ES. PRES TEST STACK 1,791'. PUMP SWEEP. HEAD. SDFN.
2:00	4.00	06:00	LOCL	Lock We	Ilhead & Secu	re	WELL SH	UT IN AND SECURE.			
SH-1-	46 TW E	BTR	2/23/20	013 06	:00 - 2/2	4/2013 (6:00				
			State/Province		County			D. W. (1) Co. 1			
PI/UWI			State/Provinc	e 1	County	Field Name	9	Well Status PRODUCING	Tota	al Depth (ftKB)	Primary Job Type

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twww.betoton.com	Faue 10/19	Report Frinted: 4/3/20131

B	Bill B	arret	t Co	rporation
Time Lo	g			
Start Time	Dur (hr)	End Time	Code	Ca
06:00	11.00	17:00	LOCL	Lock Wellhead &
47.00	2.52	47.00	DOD!	Lastall DODL

Time a La								
Time Lo		End Time	Code	T 0-	togony	т —		Com
06:00	Dur (hr)	17:00	LOCL	Lock Wellhead &	secure	WELLS	HUT IN WAITING FOR	SLB TO MOVE OVER.
17:00		17:30	BOPI	Install BOP's		1		OP. PU 4-1/2" HES DUMMY PLUG.
1				L				PUT 2000 PSI ON ANNULUS. PRES TEST LINE TO
17:30	2.00	19:30	WLWK	Wireline		8500 PS LINER T DUMMY	I. EQUALIZE 1000 PSI OP. CORRELATE TO PLUG AS PUMP DOW	AND OPEN WELL. RIH W/ 4-1/2" DUMMY PLUG TO JTS UNDER LINER TOP AT. 7063' AND 7105'. RIH W/ VN WITH HES. BEGIN 2 BPM AT 1900 PSI. END 9.9 TO 11,785'. POOH W/ DUMMY PLUG.
19:30	2.50	22:00	PFRT	Perforating		PU 3-1/8	" PERF GUNS (23 GR	48 EOD, 36" PENT, 4 SPF) INTO LUBE. EQUALIZE
						1000 PS PUMP D SHUT D HOLES I RD SLB	I. RIH AND CORRELA' OWN WITH HES. BEG OWN AT 11,776'. PULI N 15' AS PER DESIGN AND HES.	TE TO JTS BELOW LT AT 7063' AND 7105'. RIH AS BIN 2 BPM AT 2200 PSI. END 10 BBPM AT 3450 PSI. L UP AND PERF CR-3 FORM 11,495'-11,757' WITH 60 N. POOH. SHUT WELL IN. VERIFY ALL PERFS SHOT.
22:00	8.00	06:00	LOCL	Lock Wellhead &	Secure	WELL SI	HUT IN AND SECURE.	
5H-1-	46 TW E	TR :	2/24/20	013 06:00 -	2/25/2013 (6:00		
API/UWI			tate/Provinc		Field Name		Well Status	Total Depth (ftKB) Primary Job Type
43-013-5	1216				Black Ta	ail Ridge	PRODUCING	11,918.0 Drilling & Completion
Time Lo	g							
Start Time	Dur (hr)	End Time			egory	1101/5/1		Com
06:00	24.00	06:00	GOP	General Operation	ons	MOVE IN	AND FILLING FRAC	LINE.
5H-1-	46 TW E	BTR 2	2/25/20	013 06:00 -	2/26/2013 (6:00		
API/UWI		s	state/Province	e County	Field Name	e	Well Status	Total Depth (ftKB) Primary Job Type
43-013-5	1216				Black Ta	ail Ridge	PRODUCING	11,918.0 Drilling & Completion
Time Lo								
Start Time	Dur (hr)	End Time			egory	DATTED	VALINDED CONCEDU	COM CTION, FILLING FRAC LINE, BACKSIDE MANIFOLD
06:00	24.00		GOP	General Operation		IN. RIVE	R LOAD OUT SET.	CHON. FILLING FRAC LINE. BACKSIDE MANIFOLD
5H-1-	46 TW E	BTR 2	2/26/20	013 06:00 -	2/27/2013 (6:00	•	
API/UWI		s	tate/Province	e County	Field Name		Well Status	Total Depth (ftKB) Primary Job Type
43-013-5	_				Black Ta	ail Ridge	PRODUCING	11,918.0 Drilling & Completion
Time Lo	<u> </u>							
Start Time 06:00	Dur (hr) 24.00	End Time	GOP	General Operation	egory	DATTED	VIINDED CONSTRUC	COM CTION, FINISH FILLING FRAC LINE, HEAT FRAC
06.00	24.00	06.00	GOF	General Operation		LINE.		
5H-1-	46 TW E	TR 2	2/27/20	013 06:00 -	2/28/2013 0	6:00		
API/UWI 43-013-5	51216	S	tate/Province	e County	Field Name Black Ta	ail Ridge	Well Status PRODUCING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
Time Lo	_						<u></u>	
Start Time	Dur (hr)	End Time	Code		egory			Com
06:00	24.00	06:00	GOP	General Operation	ns	MIRU HE	S AND START FRAC	ON 5H-1-46 UB
	46 TW E				3/1/2013 06			
API/UWI	:1216	S	tate/Province	County	Field Name	e ail Ridge	Well Status PRODUCING	Total Depth (ffKB) Primary Job Type 11,918.0 Drilling & Completion
43-013-5					Diaux 1	an riuge	TI NODOGING	11,010.0 Drilling & Completion
Time Lo Start Time	g Dur (hr)	End Time	Code	Cat	egory	Т		Com
06:00		20:00	LOCL	Lock Wellhead &		WSI And	Secured.	
20:00		21:15	SRIG	Rig Up/Down		MORU F		e Up HP And Chemicals. Pressure Test To 9500#. 1800#'s
21:15	0.24	21:35	SMTG	Safety Meeting			'	out Smoking Area, Escape Routes, Emergency Vehicle,
21:15		21.30	SIVITG	Jaiety Meeting			ection, Tight Spots And	



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Time Log		1			
Start Time	Dur (hr)	End Time		Category	Com
21:35	1.25	22:50	FRAC	Frac. Job	Frac Stage 1. Fluid System: Hybor G 16 Open Well, 1,271 Psi. ICP. BrokeDown At 10.0 Bpm And 3,718 Psi Pump 4000 Gals. 15% HCL. Get Stabilized Injection Of 35.2 Bpm And 5,561 Psi., Get ISIP, 2,906 Psi 0.83 Psi./Ft. F.G 20/60 Holes. Stage Into XLink Pad, 49.8 Bpm At 6,328 Psi On Perfs, 60.7 Bpm At 7,138 Psi., 18,826 Gals. Stage Into 1.0# 20/40 White Prop, 60.4 Bpm At 7,760 Psi On Perfs, 60.3 Bpm At 7,624 Psi., 9,999 Gals. Stage Into 2.0# 20/40 White Prop, 55.4 Bpm At 7,202 Psi On Perfs, 55.8 Bpm At 6,450 Psi., 15,072 Gals. Stage Into 2.5# 20/40 White Prop, 55.8 Bpm At 6,332 Psi On Perfs, 55.9 Bpm At 6,221 Psi., 25,282 Gals. Stage Into 3.0# 20/40 White Prop, 55.9 Bpm At 6,058 Psi On Perfs, 55.4 Bpm At 6,748 Psi., 13,911 Gals. Stage Into Flush, Flush 15 Bbls. Over Bottom Perf Get ISDP, 3,166 Psi 0.83 Psi./Ft. F.G WSI And Secured. Total 20/40 White Prop - 140,300# Total Clean - 104,622 Gals 2,491 Bbls BWTR - 2,669 Bbls. Max. Rate - 60.4 Bpm Avg. Rate - 54.7 Bpm Max. Psi 7,759 Psi. Avg. Psi 6,548 Psi.
22:50	0.33	23:10	CTUW	W/L Operation	Well Turned Over To WireLine. Pick Up Gun String And CFP Plug Assembly. Equalize To Well Pressure.
23:10	2.17	01:20	PFRT	Perforating	RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 90 Degree Phasing, 3 Spf, .36" Penetration Charges, 16 Gms., .44 Dia. Holes. Correlating To SLB CBL/CCL Dated 02-15-2013. Found And Correlated To Liner Top. Started Pumping At 2 Bpm, Brought Rate UpTo 10 Bpm Until At Depth. Pull UpTo Depth, Set CFP At 11,465'. 2,300 Psi. Perforate Stage 2 CR-3 Zone, 11,173 - 11,435'. 60 Holes. 2,150 Psi POOH. LayDown Gun, Verify All Shots Fired, WSI And Secured.
01:20	0.33	01:40	GOP	General Operations	Well Turned Over To HES. Pressure Test To 8500#. Equalize, Open To Well. Drop Ball, Let Fall 15 Minutes.
01:40		03:10	FRAC	Frac. Job	Frac Stage 2. Fluid System: Hybor G 16 Open Well, 1,905 Psi. ICP. BrokeDown At 13.0 Bpm And 4,948 Psi Pump 4000 Gals. 15% HCL. Get Stabilized Injection Of 31.6 Bpm And 6,282 Psi., Get ISIP, 3,658 Psi 0.93 Psi./Ft. F.G 20/60 Holes. Stage Into XLink Pad, 30.0 Bpm At 6,003 Psi On Perfs, 44.7 Bpm At 6,609 Psi., 18,816 Gals. Stage Into 1.0# 20/40 White Prop, 44.8 Bpm At 6,747 Psi On Perfs, 44.6 Bpm At 6,665 Psi., 10,008 Gals. Stage Into 2.0# 20/40 White Prop, 44.6 Bpm At 6,723 Psi On Perfs, 55.8 Bpm At 6,450 Psi., 15,344 Gals. Stage Into 2.5# 20/40 White Prop, 54.7 Bpm At 6,636 Psi On Perfs, 55.4 Bpm At 6,448 Psi., 25,536 Gals. Stage Into 3.0# 20/40 White Prop, 55.5 Bpm At 6,379 Psi On Perfs, 55.5 Bpm At 6,315 Psi., 13,390 Gals. Stage Into Flush, Flush 15 Bbls. Over Bottom Perf Get ISDP, 3,024 Psi 0.85 Psi./Ft. F.G WSI And Secured. Total 20/40 White Prop - 140,200# Total Clean - 121,110 Gals 2,884 Bbls BWTR - 3,060 Bbls. Max. Rate - 55.5 Bpm Avg. Rate - 52.1 Bpm Max. Psi 6,851 Psi. Avg. Psi 6,482 Psi.
03:10	0.17	03:20	CTUW	W/L Operation	Well Turned Over To WireLine. Pick Up Gun String And CFP Plug Assembly. Equalize To Well Pressure.
03:20	2.17	05:30	PFRT	Perforating	RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 90 Degree Phasing, 3 Spf, .36" Penetration Charges, 16 Gms., .44 Dia. Holes. Correlating To SLB CBL/CCL Dated 02-15-2013. Found And Correlated To Liner Top. Started Pumping At 2 Bpm, Brought Rate UpTo 10 Bpm Until At Depth. Pull UpTo Depth, Set CFP At 11,143". 2,400 Psi. Perforate Stage 2 CR-3 Zone, 10,851 - 11,113". 60 Holes. 2,200 Psi POOH. LayDown Gun, Verify All Shots Fired, WSI And Secured.
05:30	0.50	06:00	GOP	General Operations	Well Turned Over To HES. Pressure Test To 8500#. Equalize, Open To Well. Drop Ball, Let Fall 15 Minutes.

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5H-1-46 TW BTR 3/1/2013 06:00 - 3/2/2013 06:00

api/uwi 43-013-{	51216	Sta	ate/Province	#	County	Field Name Black Tail Ridge	Well Status PRODUCING	Total Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion
Time Lo	<u> </u>							
eart Time	Dur (hr) Ei	nd Time 77:30	Code FRAC	Frac. Jo	Category	FRAC S PRESSI OPEN V LET SE BREAK PMP 40 FLUSH STAGE PERFS CONT X STAGE 7333 PS STAGE 6996 PS STAGE 6582 PS STAGE 6382 PS FLUSH WSI WI ISDP 32 MAX RA AVE RA PMP 14	JRE TEST LINES TO 931 VELL W/ 1945 PSI AT 05 LL FALL FOR 15 MIN. PL DOWN 3886 PSI AT 10. 00 GAL 15% HCL ACID. W/ 7331 GAL. 37.7 BPM XL PAD. STABLE RATE OPEN 20/60. L PAD. 53.2 BPM AT 72: TO 1 PPA 20/40 WHITE. SI. TO 2 PPA 20/40 WHITE. SI. TO 2.5 PPA 20/40 WHITE. SI. TO 3 PPA 20/40 WHITE. SI.	247 JMP TO SEAT BALL. I BPM. 10.4 BPM AT 3472 PSI. AT 7531 PSI. OF 42.8 BPM AT 6566 PSI. ISIP 3274. FG .74. 25 PSI. 53.2 BPM AT 7327 PSI. ON PERFS 53.2 BPM AT 53.1 BPM AT 7051 PSI. ON PERFS 58.0 BPM AT E. 58.0 BPM AT 6919 PSI. ON PERFS 58.1 BPM AT 58.2 BPM AT 6480 PSI. ON PERFS 58.2 BPM AT ER TO WIRELINE. FG .88 MAX PRES 7347 PSI AVE PRES 6774 PSI
:30	2.00 09):30 F	PFRT	Perforati	ng	PERF S AND EQ PUMP D 2500 PS NET. PO	667 BBLS TG #4- PU HES OBSIDE UALIZE 2650 PSI. OPEN OWN TO DEPTH AT 10 I. PULL UP AND PERF (ÁN 4-1/2" CFP AND GUNS FOR STAGE 4 INTO LUB I WELL AND RIH. CORRELATE TO LINER TO. BPM. PULL UP AND SET CFP AT 10,821' WITH CR-3 FORM 10,529'-10,791' WITH 60 HOLES IN 15' UNS SHOT, DROP BALL. TURN WELL OVER TO
9:30	1.50 11	:00 F	FRAC	Frac. Joi		PRESSUOPEN VILET BAIL BREAK PMP 400 FLUSH VILET SON STAGE PERFS CONT X STAGE 7151 PS STAGE 6775 PS STAGE 6823 PS STAGE 6728 PS STAGE	JRE TEST LINES TO 930 JELL WI 2089 PSI AT 09 LE FALL FOR 15 MIN. PL DOWN 4112 PSI AT 94 DO GAL 15% HCL ACID. N/ 6762 GAL. 38.5 BPM AK 10 MIN. XL PAD. STABLE RATE OPEN 24/60. L PAD. 58.3 BPM AT 72: TO 1 PPA 20/40 WHITE. I. TO 2 PPA 20/40 WHITE. I. TO 2.5 PPA 20/40 WHITI. I. TO 2.5 PPA 20/40 WHITI. I. TO 3 PPA 20/40 WHITI. I. TO 3 PPA 20/40 WHITI. II.	131 IMP TO SEAT BALL. BPM. 10.4 BPM AT 3526 PSI. AT 7485 PSI. OF 44.8 BPM AT 6012 PSI. ISIP 3256. FG .74. P5 PSI. 58.3 BPM AT 7325 PSI. ON PERFS 58.2 BPM AT 58.2 BPM AT 7063 PSI. ON PERFS 58.2 BPM AT E. 58.3 BPM AT 6717 PSI. ON PERFS 58.2 BPM AT 58.2 BPM AT 6791 PSI. ON PERFS 58.2 BPM AT
						AVE RA PMP 14 SLK WT 118,130	.TE 58.3 BPM TE 58.3 BPM 0,300 LBS 20/40 WHITE R 30,448 GAL	FG. 88 MAX PRES 7443 PSI AVE PRES 6877 PSI . 150 LBS SCALE SORB 3 20# HYBOR G (16) 83,682 GAL (TOTAL FLUID



Time Log	Dur (hr)	End Time	Code	Category	Com
11:00		13:00	PFRT	Perforating	PERF STG #5- PU HES OBSIDEAN 4-1/2" CFP AND GUNS FOR STAGE 5 INTO LUB AND EQUALIZE 2600 PSI. OPEN WELL AND RIH. CORRELATE TO LINER TO. PUMP DOWN TO DEPTH AT 10 BPM. PULL UP AND SET CFP AT 10,494' WITH 2500 PSI. PULL UP AND PERF CR-3 FORM 10,207'-10,469' WITH 60 HOLES IN 15' NET. POOH AND VERIFY ALL GUNS SHOT, DROP BALL. TURN WELL OVER TO HES WITH 2400 PSI.
13:00	1.50	14:30	FRAC	Frac. Job	FRAC STG #5- CR-3 PERFS 10,207'-10,469' 60 HOLES IN 15' NET. PRESSURE TEST LINES TO 9300 PSI. OPEN WELL W/ 2081 PSI AT 13:03 LET BALL FALL FOR 15 MIN. PUMP TO SEAT BALL. BREAK DOWN 4441 PSI AT 10.4 BPM. PMP 4000 GAL 15% HCL ACID. 10.4 BPM AT 3719 PSI. FLUSH W/ 6261 GAL. 40.0 BPM AT 7317 PSI. LET SOAK 10 MIN. STAGE XL PAD. STABLE RATE OF 45.8 BPM AT 5535 PSI. ISIP 2758. FG .70. PERFS OPEN 25/60. CONT XL PAD. 59.5 BPM AT 6740 PSI. STAGE TO 1 PPA 20/40 WHITE. 60.1 BPM AT 6740 PSI. ON PERFS 60.1 BPM AT 6369 PSI. STAGE TO 2 PPA 20/40 WHITE. 60.1 BPM AT 6489 PSI. ON PERFS 60.2 BPM AT 6369 PSI. STAGE TO 2.5 PPA 20/40 WHITE. 60.1 BPM AT 6293 PSI. ON PERFS 60.2 BPM AT 6319 PSI. STAGE TO 3 PPA 20/40 WHITE. 60.1 BPM AT 6293 PSI. ON PERFS 60.1 BPM AT 6250 PSI. STAGE TO 3 PPA 20/40 WHITE. 60.1 BPM AT 6251 PSI. ON PERFS 60.1 BPM AT 6250 PSI. FLUSH 60.1 BPM AT 6350 PSI. WSI WITH 3000 PSI. TURN OVER TO WIRELINE. ISDP 3059 FG .81 MAX RATE 60.2 BPM AVE PRES 6359 PSI AVE RATE 60.1 BPM AVE PRES 6359 PSI PMP 140,200 LBS 20/40 WHITE. 150 LBS SCALE SORB 3 SLK WTR 23,746 GAL 20# HYBOR G (16) 82,747 GAL (TOTAL FLUID 110,493 GAL) BWTR 2631 BBLS
14:30	1.84	16:20	PFRT	Perforating	PERF STG #6- PU HES OBSIDEAN 4-1/2" CFP AND GUNS FOR STAGE 6 INTO LUB AND EQUALIZE 2800 PSI. OPEN WELL AND RIH. CORRELATE TO LINER TO. PUMP DOWN TO DEPTH AT 10 BPM. PULL UP AND SET CFP AT 10,177' WITH 2500 PSI. PULL UP AND PERF CR-3 FORM 9885'-10,147' WITH 60 HOLES IN 15' NET. POOH AND VERIFY ALL GUNS SHOT, DROP BALL. TURN WELL OVER TO HES WITH 2350 PSI.
16:20	0.42	16:45	GOP	General Operations	Well Turned Over To HES. Pressure Test To 8500#. Equalize, Open To Well. Drop Ball, Let Fall 15 Minutes.
16:45	1.25	18:00	FRAC	Frac. Job	Frac Stage 6. Fluid System: Hybor G 16 Open Well, 2,052 Psi. ICP. BrokeDown At 10.5 Bpm And 3,764 Psi Pump 4000 Gals. 15% HCL. Get Stabilized Injection Of 40.0 Bpm And 7,174 Psi., Get ISIP, 3,043 Psi 0.85 Psi./Ft. F.G 25/60 Holes. Stage Into XLink Pad, 29.6 Bpm At 5,646 Psi On Perfs, 50.2 Bpm At 5,703 Psi., 18,895 Gals. Stage Into 1.0# 20/40 White Prop, 55.5 Bpm At 6,575 Psi On Perfs, 55.3 Bpm At 6,363 Psi., 10,059 Gals. Stage Into 2.0# 20/40 White Prop, 55.2 Bpm At 6,581 Psi On Perfs, 55.3 Bpm At 6,160 Psi., 15,042 Gals. Stage Into 2.5# 20/40 White Prop, 55.4 Bpm At 6,055 Psi On Perfs, 55.4 Bpm At 5,999 Psi., 26,565 Gals. Stage Into 3.0# 20/40 White Prop, 55.3 Bpm At 6,114 Psi On Perfs, 55.3 Bpm At 6,234 Psi., 12,496 Gals. Stage Into Flush, Flush 15 Bbls. Over Bottom Perf Get ISDP, 3,270 Psi 0.88 Psi./Ft. F.G WSl And Secured. Total 20/40 White Prop - 140,200# Total Clean - 116,337 Gals 2,770 Bbls BWTR - 2,960 Bbls. Max. Rate - 55.3 Bpm Max. Psi 6,654 Psi. Avg. Psi 6,176 Psi.
18:00	0.17	18:10	CTUW	W/L Operation	Well Turned Over To WireLine. Pick Up Gun String And CFP Plug Assembly. Equalize To Well Pressure.



Bill Barrett Corporation

Start Time 18:10	Dur (hr)	End Time	Code	Category	Com
18:10	166	40 50	DECT		
	1.55	19:50	PFRT	Perforating	RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 90 Degree Phasing, 3 Spf, .36" Penetration Charges, 16 Gms., .44 Dia. Holes. Correlating To SLB CBL/CCL Dated 02-15-2013. Found And Correlated To Liner Top. Started Pumping At 2 Bpm, Brought Rate UpTo 10 Bpm Until At Depth. Pull UpTo Depth, Set CFP At 9,855'. 2,500 Psi. Perforate Stage 7 CR-3 Zone, 9,563 - 9,825'. 60 Holes. 2,300 Psi POOH. LayDown Gun, Verify All Shots Fired, WSI And Secured.
19:50	0.25	20:05	GOP	General Operations	Well Turned Over To HES. Pressure Test To 8500#. Equalize, Open To Well. Drop Ball, Let Fall 15 Minutes.
20:05		21:15	FRAC	Frac. Job	Frac Stage 7. Fluid System: Hybor G 16 Open Well, 2,085 Psi. ICP. BrokeDown At 10.1 Bpm And 3,568 Psi Pump 4000 Gals. 15% HCL. Get Stabilized Injection Of 40.2 Bpm And 6,051 Psi., Get ISDP, 3,176 Psi 0.87 Psi./Ft. F.G 25/60 Holes. Stage Into XLink Pad, 29.8 Bpm At 4,961 Psi On Perfs, 50.3 Bpm At 6,016 Psi., 18,909 Gals. Stage Into 1.0# 20/40 White Prop, 59.4 Bpm At 7,035 Psi On Perfs, 59.5 Bpm At 6,844 Psi., 10,010 Gals. Stage Into 2.0# 20/40 White Prop, 59.6 Bpm At 6,590 Psi On Perfs, 59.6 Bpm At 6,278 Psi., 15,029 Gals. Stage Into 2.5# 20/40 White Prop, 59.5 Bpm At 6,289 Psi On Perfs, 59.6 Bpm At 6,285 Psi., 26,852 Gals. Stage Into 3.0# 20/40 White Prop, 59.5 Bpm At 6,454 Psi On Perfs, 59.5 Bpm At 6,319 Psi., 12,454 Gals. Stage Into Flush, Flush 15 Bbls. Over Bottom Perf Get ISIP, 3,244 Psi 0.88 Psi./Ft. F.G WSI And Secured. Total 20/40 White Prop - 140,100# Total Clean - 114,905 Gals 2,736 Bbls BWTR - 2,916 Bbls. Max. Rate - 59.5 Bpm Max. Psi 7,105 Psi. Avg. Psi 6,438 Psi.
21:15	0.17	21:25	CTUW	W/L Operation	Well Turned Over To WireLine. Pick Up Gun String And CFP Plug Assembly. Equalize To Well Pressure.
21:25	1.66	23:05	PFRT	Perforating	RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 90 Degree Phasing, 3 Spf, .36" Penetration Charges, 16 Gms., .44 Dia. Holes. Correlating To SLB CBL/CCL Dated 02-15-2013. Found And Correlated To Liner Top. Started Pumping At 2 Bpm, Brought Rate UpTo 10 Bpm Until At Depth. Pull UpTo Depth, Set CFP At 9,533'. 2,500 Psi. Perforate Stage 8 CR-3 Zone, 9,241 - 9,503'. 60 Holes. 2,400 Psi POOH. LayDown Gun, Verify All Shots Fired, WSI And Secured.
23:05	0.25	23:20	GOP	General Operations	Well Turned Over To HES. Pressure Test To 8500#. Equalize, Open To Well. Drop Ball, Let Fall 15 Minutes.
23:20	1.17	00:30	FRAC	Frac. Job	Frac Stage 8. Fluid System: Hybor G 16 Open Well, 2,137 Psi. ICP. BrokeDown At 10.0 Bpm And 4,421 Psi Pump 4000 Gals. 15% HCL. Get Stabilized Injection Of 38.9 Bpm And 6,844 Psi., Get ISDP, 3,237 Psi 0.88 Psi./Ft. F.G 25/60 Holes. Stage Into XLink Pad, 31.6 Bpm At 5,576 Psi On Perfs, 54.7 Bpm At 6,333 Psi., 18,911 Gals. Stage Into 1.0# 20/40 White Prop, 60.4 Bpm At 7,139 Psi On Perfs, 58.9 Bpm At 6,890 Psi., 10,256 Gals. Stage Into 2.0# 20/40 White Prop, 58.8 Bpm At 6,997 Psi On Perfs, 57.2 Bpm At 6,715 Psi., 15,012 Gals. Stage Into 2.5# 20/40 White Prop, 57.3 Bpm At 6,554 Psi On Perfs, 57.3 Bpm At 6,449 Psi., 27,035 Gals. Stage Into 3.0# 20/40 White Prop, 57.3 Bpm At 6,422 Psi On Perfs, 57.3 Bpm At 6,442 Psi., 12,501 Gals. Stage Into Flush, Flush 15 Bbls. Over Bottom Perf Get ISIP, 3,481 Psi 0.91 Psi./Ft. F.G WSI And Secured. Total 20/40 White Prop - 140,200# Total Clean - 112,740 Gals 2,684 Bbls BWTR - 2,860 Bbls. Max. Rate - 60.4 Bpm Avg. Rate - 57.6 Bpm Max. Psi 7,320 Psi. Avg. Psi 6,567 Psi.
00:30	0.25	00:45	стиш	W/L Operation	Well Turned Over To WireLine. Pick Up Gun String And CFP Plug Assembly. Equalize To Well Pressure.

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Time Lo Start Time	Dur (hr)	End Time	Code	Category	Com
00:45		04:05	PFRT	Perforating	RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 90 Degree Phasing, 3 Spf, 36" Penetration Charges, 16 Gms., .44 Dia. Holes. Correlating To SLB CBL/CCL Dated 02-15-2013. Found And Correlated To Liner Top. Started Pumping At 2 Bpm, Brought Rate UpTo 10 Bpm Until At Depth. Pull UpTo Depth, Attemp To Set CFP, Did See Any Indication That Plug Set. POOH At 50'/Min.
04:05	0.42	04:30	стиж	W/L Operation	Plug Not On When To Surface, Set At 9,200', 2,500 Psi. Pick Up Dummy Plug And Perf. Gun. Nipple Up To Well, Equalize.
04:30	1.50	06:00	PFRT	Perforating	RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 90 Degree Phasing, 3 Spf, .36" Penetration Charges, 16 Gms., .44 Dia. Holes. Correlating To SLB CBL/CCL Dated 02-15-2013. Found And Correlated To Liner Top. Started Pumping At 2 Bpm, Brought Rate UpTo 10 Bpm Until At Depth. Perforate Stage 9 CR-3 Zone, 8,919 - 9,181'. 60 Holes. 2,400 Psi POOH. LayDown Gun, Verify All Shots Fired, WSI And Secured.
	46 TW E			13 06:00 - 3/3/20	
api/UWI 43-013-5		S	tate/Provinc	e County	Field Name Well Status Total Depth (ftKB) Primary Job Type Black Tail Ridge PRODUCING 11,918.0 Drilling & Completion
Time Log	Dur (hr)	End Time	Code	Category	Com
06:00	. ,	06:15	PFRT	Perforating	CREW CHANGE. HSM. CHECK FLUID VOLUMES.
					CONT POOH W/ GUNS FROM STG #9. VERIFY ALL GUNS SHOT. DROP BALL. TURN OVER TO HES. AFTER BALL WAS DROPPED FOUND OUT THAT BTM PART OF DUMMY PLUG WAS BROKEN. PIECES OF DUMMY PLUG IN WELL. CONT WITH FRAC.
06:15	1.50	07:45	FRAC	Frac. Job	FRAC STG #9- CR-3 PERFS 8919'-9181' 60 HOLES IN 15' NET. PRESSURE TEST LINES TO 9200 PSI. OPEN WELL W/ 2151 PSI AT 06:15 LET BALL FALL FOR 15 MIN. PUMP TO SEAT BALL. BREAK DOWN 4350 PSI AT 15.3 BPM. PMP 4000 GAL 15% HCL ACID. 10.6 BPM AT 3573 PSI. FLUSH W/ 5940 GAL. 45.1 BPM AT 6815 PSI. LET SOAK 10 MIN. STAGE XL PAD. STABLE RATE OF 50.7 BPM AT 6286 PSI. ISIP 2803. FG. 82. PERFS OPEN 20/60. CONT XL PAD. 57.9 BPM AT 6755 PSI. STAGE TO 1 PPA 20/40 WHITE. 61.4 BPM AT 6845 PSI. ON PERFS 61.9 BPM AT 6554 PSI. STAGE TO 2 PPA 20/40 WHITE. 61.9 BPM AT 6399 PSI. ON PERFS 62.1 BPM AT 6254 PSI. STAGE TO 2.5 PPA 20/40 WHITE. 62.1 BPM AT 6258 PSI. ON PERFS 62.1 BPM AT 6320 PSI. STAGE TO 3 PPA 20/40 WHITE. 61.9 BPM AT 6418 PSI. ON PERFS 61.9 BPM AT 6438 PSI. LOST PUMP. FLUSH W/ 5 PUMPS. FLUSH 51.6 BPM AT 5719 PSI. WSI WITH 3100 PSI. TURN OVER TO WIRELINE. ISDP 3047 FG. 85 MAX RATE 62.2 BPM AVE PRES 6392 PSI PMP 140,500 LBS 20/40 WHITE. 150 LBS SCALE SORB 3 SLK WTR 24,825 GAL 20# HYBOR G (16) 83,180 GAL (TOTAL FLUID BWTR 2667 BBLS
7:45	1.75	09:30	PFRT	Perforating	PERF STG #10- PU HES OBSIDEAN 4-1/2" CFP AND GUNS FOR STAGE 10 INTO LUBE AND EQUALIZE 2800 PSI. OPEN WELL AND RIH. CORRELATE TO LINER TO PUMP DOWN TO DEPTH AT 10 BPM. PULL UP AND SET CFP AT 8889' WITH 2500 PSI. PULL UP AND PERF CR-3 FORM 8537'-8799' WITH 60 HOLES IN 15' NET. POOH AND VERIFY ALL GUNS SHOT, DROP BALL. TURN WELL OVER TO HES



Time Lo		End Time	Codo	Calagon	Com
Start Time 09:30	Dur (hr)	End Time 11:00	FRAC	Category Frac. Job	Com FRAC STG #10- CR-3 PERFS 8537'-8799' 60 HOLES IN 15' NET.
09.00	1.50	11.00	1.100	1 140. 000	PRESSURE TEST LINES TO 9300 PSI.
					OPEN WELL W/ 2158 PSI AT 12:37
		i			LET BALL FALL FOR 10 MIN. PUMP TO SEAT BALL.
			1		BREAK DOWN 3579 PSI AT 15.0 BPM.
			ĺ		PMP 4000 GAL 15% HCL ACID. 10.3 BPM AT 3282 PSI.
					FLUSH W/ 5263 GAL. 39.9 BPM AT 5917 PSI. LET SOAK 10 MIN.
					STAGE XL PAD. STABLE RATE OF 51.4 BPM AT 5742 PSI. ISIP 3019. FG .85.
		İ	İ		PERFS OPEN 24/60.
l					CONT XL PAD. 60.7 BPM AT 6655 PSI.
					STAGE TO 1 PPA 20/40 WHITE. 61.0 BPM AT 6648 PSI. ON PERFS 61.1 BPM AT
					6467 PSI.
					STAGE TO 2 PPA 20/40 WHITE. 61.2 BPM AT 6288 PSI. ON PERFS 61.3 BPM AT 6085 PSI.
Ī					STAGE TO 2.5 PPA 20/40 WHITE. 61.3 BPM AT 6035 PSI. ON PERFS 61.3 BPM AT
					6042 PSI
					STAGE TO 3 PPA 20/40 WHITE. 61.0 BPM AT 6228 PSI. ON PERFS 61.0 BPM AT
					6381 PSI.
1					CUT SAND ON 3 PPA DUE TO SHARP INCREASE IN NET PRESSURES.
					FLUSH 60.0 BPM AT 7250 PSI. SLOW RATE TO FINISH FLUSH. WSI WITH 3500 PSI. TURN OVER TO WIRELINE.
					VVOI VVIII 0000 I OI. TOTAL OVER TO VVIIVELIIVE.
					ISDP 3623 FG .93
					MAX RATE 61.4 BPM MAX PRES 6659 PSI
ŀ					AVE RATE 61.2 BPM AVE PRES 6169 PSI
					PMP 129,200 LBS 20/40 WHITE. 150 LBS SCALE SORB 3 SLK WTR 20,042 GAL 20# HYBOR G (16) 80,838 GAL. (TOTAL FLUID
					SLK WTR 20,042 GAL 20# HYBOR G (16) 80,838 GAL. (TOTAL FLUID 104.880 GAL)
					BWTR 2497 BBLS
11:00	1.50	12:30	PFRT	Perforating	PERF STG #11- PU HES OBSIDEAN 4-1/2" CFP AND GUNS FOR STAGE 11 INTO
11.00	1.00	12.00		, onordania	LUBE AND EQUALIZE 2800 PSI. OPEN WELL AND RIH. CORRELATE TO LINER TO.
					PUMP DOWN TO DEPTH AT 10 BPM. PULL UP AND SET CFP AT 8507' WITH 2500
					PSI. PULL UP AND PERF CR-3 FORM 8215'-8477' WITH 60 HOLES IN 15' NET.
					POOH AND VERIFY ALL GUNS SHOT, DROP BALL. TURN WELL OVER TO HES
					WITH 2300 PSI.
12:30	1.75	14:15	FRAC	Frac. Job	FRAC STG #11- CR-3 PERFS 8215'-8477' 60 HOLES IN 15' NET.
					PRESSURE TEST LINES TO 9200 PSI. OPEN WELL W/ 2120 PSI AT 09:34
					LET BALL FALL FOR 10 MIN. PUMP TO SEAT BALL.
					BREAK DOWN 3855 PSI AT 15.2 BPM.
1		}			PMP 4000 GAL 15% HCL ACID. 10.5 BPM AT 3613 PSI.
ĺ					FLUSH W/ 5420 GAL. 42.5 BPM AT 6970 PSI.
					LET SOAK 10 MIN.
					STAGE XL PAD. STABLE RATE OF 51.6 BPM AT 5562 PSI. ISIP 3136. FG .86. PERFS OPEN 27/60.
					CONT XL PAD. 60.4 BPM AT 6385 PSI.
					STAGE TO 1 PPA 20/40 WHITE. 60.5 BPM AT 6421 PSI. ON PERFS 60.6 BPM AT
-					6226 PSI.
					STAGE TO 2 PPA 20/40 WHITE. 60.7 BPM AT 6084 PSI. ON PERFS 62.8 BPM AT
					6104 PSI. STAGE TO 2.5 PPA 20/40 WHITE. 62.8 BPM AT 6142 PSI. ON PERFS 62.8 BPM AT
					6157 PSI.
					NET PRESSURE CLIMBING SLOW, EXTEND 2.5 PPA FOR SAND VOLUME.
					62.5 BPM AT 6321 PSI, PUMP RATE BOUNCED AT FLUSH. CAUSED SHARP
		1			INCREASE IN NET.
					FLUSH 62.3 BPM AT 6795 PSI. SLOW RATE TO FINISH FLUSH 46.2 BPM AT 6140
					PSI.
					WSI WITH 3300 PSI. TURN OVER TO WIRELINE.
					ISDP 3740 FG .94
					MAX RATE 62.8 BPM MAX PRES 6517 PSI
					AVE RATE 62.1 BPM AVE PRES 6236 PSI
					PMP 141,100 LBS 20/40 WHITE. 150 LBS SCALE SORB 3
					SLK WTR 18,741 GAL 20# HYBOR G (16) 85,430 GAL (TOTAL FLUID
					108,171 GAL)
		ļ			BWTR 2576 BBLS

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Start Time	Dur (hr)	End Time	e Code	T	Cat	egory					Com	
14:15		15:30	PFRT	Perforation		- Cydry		PERF STG #12- PU HES OBSIDEAN 4-1/2" CFP AND GUNS FOR STAGE 12 INTO LUBE AND EQUALIZE 2900 PSI. OPEN WELL AND RIH. CORRELATE TO LINER TO PUMP DOWN TO DEPTH AT 10 BPM. PULL UP AND SET CFP AT 8185' WITH 2350 PSI. PULL UP AND PERF CR-3 FORM 7958'-8155' WITH 60 HOLES IN 15' NET. POOH AND VERIFY ALL GUNS SHOT, DROP BALL. TURN WELL OVER TO HES WITH 2300 PSI.				
15:30	0.42	15:55	GOP	General	Operatio	ns		Well Turned Over To HES. Pressure Test To 8500#. Equalize, Open To Well. Drop Ball, Let Fall 15 Minutes.				
15:55	1.00	16:55	FRAC	Frac. Job				Open W. Pump 40 ISDP, 3, At 5,115 On Perfs Stage Infon Perfs	000 Gals. 15% HCL. G 354 Psi 0.89 Psi./Ft. I	okeDown At et Stabilizec F.G. 25/60 si., 15,367 (op, 57.2 Bp si., 10,051 (op, 60.2 Bp si., 15,036 (op, 60.4 Bp op, 60.4 Bp isi., 11,471 (s. Over Botte Ft. F.G. WS	Gals. m At 6,710 Psi Gals. m At 6,497 Psi Gals. m At 6,063 Psi Gals. a At 5,858 Psi Gals. bom Perf	
6:55	13.08	06:00	LOCL	Lock Wel	llhead &	Secure		WSI And	Secured, MORU On 5	5-6D-45 BTF	3	
	46 TW E			13 06:0			13 06:	00				
PI/UWI												
	1010	[8	State/Provinc	e C	ounty		Field Nam	е	Well Status	Tota	I Depth (ftKB) Primary Job Type	
3-013-5			State/Provinc	e C	County				Well Status PRODUCING	Tota	Primary Job Type 11,918.0 Drilling & Completion	
3-013-5 ime Lo		End Time		e C		egory		е		Tota		
3-013-5 ime Lo tart Time	Dur (hr)	End Time	Code		Cate		Black T	e ail Ridge		Tota	11,918.0 Drilling & Completion	
3-013-5 ime Lo tart Time	g	End Time	Code 3/7/20	13 06:0	Cate		Black T	e ail Ridge	PRODUCING		11,918.0 Drilling & Completion	
3-013-5 ime Lo tart Time 5H-1-	9 Dur (hr) 46 TW B	End Time	Code	13 06:0	Cate		Black T	e ail Ridge 00 e			11,918.0 Drilling & Completion Com Depth (ftKB) Primary Job Type	
3-013-5 me Lo art Time H-1- PI/UWI 3-013-5 me Lo	9 Dur (hr) 46 TW B	End Time	Code 3/7/20 State/Province	13 06:0	Cate	3/8/201	Black T	e ail Ridge	PRODUCING Well Status		11,918.0 Drilling & Completion	
H-1- I/UWI 3-013-5 me Lo art Time	9 Dur (hr) 46 TW E 51216 9 Dur (hr)	End Time	Code Code Code	13 06:0 e C	Cate County Cate		Black T	e ail Ridge	PRODUCING Well Status PRODUCING	Tota	11,918.0 Drilling & Completion Com Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion Com	
Me Lo art Time H-1- B-013-5 me Lo art Time 3-013-5 me Lo art Time	9 Dur (hr) 46 TW B 51216 9 Dur (hr) 8.50	End Time End Time 14:30	3/7/20 State/Provinc	13 06:0 e C	Cate County Cate Well	3/8/201	Black T	e ail Ridge 00 e ail Ridge WELL FL	PRODUCING Well Status PRODUCING OWING TO SALES W	Tota	11,918.0 Drilling & Completion Com Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion Com	
ime Lo art Time iH-1- ime Lo art Time iH-1- ime Lo art Time 3:00 4:30	9 Dur (hr) 46 TW B 51216 9 Dur (hr) 8.50 1.50	End Time End Time 14:30 16:00	3/7/20 State/Provinc Code FBCK SRIG	13 06:0 Flowback Rig Up/Do	Cate County Cate Well Own	3/8/201	Black T	e ail Ridge 00 e ail Ridge WELL FL	PRODUCING Well Status PRODUCING OWING TO SALES W SPOT AND RU COIL E	VAITING ON EQUIP.	11,918.0 Drilling & Completion Com Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion Com I COIL TBG.	
3-013-5 ime Lo tart Time 5H-1- Fi/UWI 3-013-5 ime Lo tart Time 6:00 4:30	9 Dur (hr) 46 TW B 51216 9 Dur (hr) 8.50 1.50	End Time End Time 14:30	3/7/20 State/Provinc	13 06:0 e C	Cate County Cate Well Own	3/8/201	Black T	e ail Ridge 00 e ail Ridge WELL FL MI CTS.	PRODUCING Well Status PRODUCING OWING TO SALES WAS POT AND RU COIL ET TOOLS OF CONNECT ITATOR, MOTOR, 3-7	VAITING ON EQUIP.	11,918.0 Drilling & Completion Com Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion Com	
3-013-5 ime Lo lart Time 5H-1- 67/UWI 3-013-5 ime Lo lart Time 5:00 4:30 5:00	Dur (hr) 246 TW E 51216 9 Dur (hr) 8.50 1.50 1.00	End Time End Time 14:30 16:00	3/7/20 State/Provinc Code FBCK SRIG	13 06:0 Flowback Rig Up/Do	Cate OO - 3 County Cate Well Own	3/8/201	Black T	e ail Ridge 00 e ail Ridge WELL FL MI CTS. MU STIT SUB, AG PRES TE	PRODUCING Well Status PRODUCING OWING TO SALES W SPOT AND RU COIL E TOOLS OF CONNECT ITATOR, MOTOR, 3-7	VAITING ON EQUIP. TOR, CHECI 7/8" MILL. FI	11,918.0 Drilling & Completion Com Depth (ftKB) Primary Job Type 11,918.0 Drilling & Completion Com COIL TBG.	
3-013-5 ime Lo tart Time 5H-1- FI/UWI 3-013-5 ime Lo tart Time 6:00 4:30 6:00	9 Dur (hr) 46 TW E 51216 9 Dur (hr) 8.50 1.50 1.00	End Time End Time 14:30 16:00 17:00	3/7/20 State/Province Code FBCK SRIG GOP	Flowback Rig Up/Do	Cate OO - County Cate Well Operation	3/8/201	Black T	e ail Ridge OO e ail Ridge WELL FL MI CTS. MU STI TSUB, AG PRES TE RIH W/ M D/O PLU AT 9200' MIN), 953	Well Status PRODUCING Well Status PRODUCING OWING TO SALES W SPOT AND RU COIL E TOOLS OF CONNECT ITATOR, MOTOR, 3-7 EST MILL ON COIL AS CIRC IGS AT 8185' (6 MIN), MAKE WIPER TRIP 133' (50 MIN), AND 985	VAITING ON EQUIP. FOR, CHECI 7/8" MILL. FI C .5 BPM. S 8507' (11 N TO 6900'. R 15' (91 MIN	11,918.0 Drilling & Completion Com Primary Job Type 11,918.0 Drilling & Completion Com I COIL TBG. KS, BI-DI JAR, HYD DISCONNECT, CIR ILL COIL, CIRC TEST TOOLS. MU LUBE	
3-013-5 ime Lo art Time SH-1-Pi/UWI 3-013-5 ime Lo art Time 5:00 4:30 5:00 7:00 9:30	9 Dur (hr) 46 TW B 51216 9 Dur (hr) 8.50 1.50 1.00 2.50 7.50	End Time BTR : End Time 14:30 16:00 17:00	3/7/20 State/Province Code FBCK SRIG GOP	Flowback Rig Up/Do General C	Cate County Cate Well Own Operation	3/8/201	Black T	e ail Ridge OO e ail Ridge WELL FL MI CTS. MU STI TSUB, AG PRES TE RIH W/M D/O PLU AT 9200' MIN), 95: 10,177'.	Well Status PRODUCING Well Status PRODUCING OWING TO SALES W SPOT AND RU COIL E TOOLS OF CONNECT ITATOR, MOTOR, 3-7 EST MILL ON COIL AS CIRC IGS AT 8185' (6 MIN), MAKE WIPER TRIP 133' (50 MIN), AND 985	VAITING ON EQUIP. FOR, CHECI 7/8" MILL. FI C .5 BPM. S 8507' (11 N TO 6900'. R 15' (91 MIN T TILL SLOW	TI,918.0 Drilling & Completion Com Depth (RKB)	
3-013-5 ime Lo tart Time 5H-1- Pi/UWI 3-013-5 ime Lo tart Time 6:00 4:30 6:00 7:00 9:30	9 Dur (hr) 46 TW B 51216 9 Dur (hr) 8.50 1.50 1.00 2.50 7.50	End Time 14:30 16:00 17:00 19:30 03:00	Code Code Code FBCK SRIG GOP RUTB DOPG	Flowback Rig Up/Do General C	Cate County Cate Well Own Operation	3/8/201	Black T	e ail Ridge OO e ail Ridge WELL FL MI CTS. MU STI TSUB, AG PRES TE RIH W/M D/O PLU AT 9200' MIN), 95: 10,177'. POOH TO	Well Status PRODUCING Well Status PRODUCING OWING TO SALES WE SPOT AND RU COIL RESTRICT OF CONNECT ITATOR, MOTOR, 3-7 STATUS OF CONNECT OF COIL RESTRICT OF COIL AS CIRCUS OF CONNECT OF COIL AS CIRCUS OF COIL	VAITING ON EQUIP. TOR, CHECTOR, CHECTOR, MILL. FILE STORE ST	TI,918.0 Drilling & Completion Com Depth (RKB)	
3-013-5 ime Lo tart Time 5H-1- PI/UWI 3-013-5 ime Lo tart Time 6:00 4:30 6:00 7:00 9:30	9 Dur (hr) 46 TW B 51216 9 Dur (hr) 8.50 1.50 1.00 2.50 7.50	End Time End Time 14:30 16:00 17:00 19:30 03:00 05:00 05:00	3/7/20 State/Province FBCK SRIG GOP RUTB DOPG PULT RUTB	Flowback Rig Up/Do General C Run Tubin Drill Out F Pull Tubin Run Tubir	Cate County Cate Well own Operation Description Operation	8/8/201	Black T 13 06: Field Nam Black T	e ail Ridge OO e ail Ridge WELL FL MI CTS. MU STIT SUB, AG PRES TE RIH W/M D/O PLU AT 9200' MIN), 95: 10,177'. POOH TO MU NEW W/ 2" CC	Well Status PRODUCING Well Status PRODUCING OWING TO SALES WE SPOT AND RU COIL RESTRICT OF CONNECT ITATOR, MOTOR, 3-7 STATUS OF CONNECT OF COIL RESTRICT OF COIL AS CIRCUS OF CONNECT OF COIL AS CIRCUS OF COIL	VAITING ON EQUIP. TOR, CHECTOR, CHECTOR, MILL. FILE STORE ST	TI,918.0 Drilling & Completion Com Depth (ftKB)	
3-013-5 ime Lo tart Time 5H-1- PI/UWI 3-013-5 ime Lo tart Time 6:00 4:30 6:00 7:00 9:30 3:00 5:00	9 Dur (hr) 46 TW E 51216 9 Dur (hr) 8.50 1.50 1.00 2.50 7.50	End Time End Time 14:30 16:00 17:00 19:30 03:00 05:00 05:00	Code Code FBCK SRIG GOP RUTB DOPG PULT RUTB	Flowback Rig Up/Do General C Run Tubin Drill Out F Pull Tubin Run Tubir	Cate County Cate Well own Operation Description Operation	8/8/201	Black T 13 06: Field Nam Black T	e ail Ridge OO e ail Ridge WELL FL MI CTS. MU STIT SUB, AG PRES TE RIH W/M D/O PLU AT 9200' MIN), 95: 10,177'. POOH TO MU NEW W/ 2" CC	Well Status PRODUCING Well Status PRODUCING OWING TO SALES WE SPOT AND RU COIL RESTRICT OF CONNECT ITATOR, MOTOR, 3-7 STATUS OF CONNECT OF COIL RESTRICT OF COIL AS CIRCUS OF CONNECT OF COIL AS CIRCUS OF COIL	VAITING ON EQUIP. FOR, CHECI 7/8" MILL. FI C .5 BPM. \$ 8507' (11 M TO 6900'. R 15' (91 MIN T TILL SLOW IOTOR.	TI,918.0 Drilling & Completion Com Depth (ftKB)	



Start Time	Dur (hr)	End Time	Code	Category	Com					
06:00	1.34	07:20	TRIP	Tripping	Running In Hole With Mill #2, Bi-Di Jar, Hydraulic Disconnect, Dual Circ. Sub, Agitator And Motor. Static Well Pressure 750#. At 200' Open Well To FlowBack, .5 Bpm Returns, 500#'s. Start Pumping At 2 Bpm At 6000', 600#'s Flowing Pressure, 3 Bpm Returns.					
07:20	0.50	07:50	CLN	Clean Out Hole	Tag CFP #7 At 10,177', 3.0 Bpm Returns, 550#. DrillOut In 31 Min., 3.0 Bpm Returns, 400#.					
07:50	0.17	08:00	TRIP	Tripping	TIH To Next Plug.					
08:00	0.58	08:35	CLN	Clean Out Hole	Tag CFP #8 At 10,494', 3.0 Bpm Returns, 400#. DrillOut In 34 Min., 3.0 Bpm Returns, 300#.					
08:35	0.67	09:15	TRIP	Tripping	TIH To Next Plug. 150' Of Sand.					
09:15	0.75	10:00	CLN	Clean Out Hole	Tag CFP #9 At 10,821', 3.0 Bpm Returns, 300#. DrillOut In 46 Min., 3.0 Bpm Returns, 300#.					
10:00	2.17	12:10	TRIP	Tripping	TIH To Next Plug. 300' Of Sand.					
12:10	1.00	13:10	CLN	Clean Out Hole	Tag CFP #10 At 11,143', 3.0 Bpm Returns, 500#. DrillOut In 60 Min., 3.0 Bpm Returns, 500#.					
13:10	1.50	14:40	TRIP	Tripping	TIH To Next Plug. 280' Of Sand.					
14:40	1.33	16:00	CTU	Clean Out	Tag CFP #11 At 11,465', 3.0 Bpm Returns, 600#. DrillOut In 75 Min., 3.0 Bpm Returns, 550#.					
16:00	0.83	16:50	TRIP	Tripping	TIH To PBTD. 100' Of Sand.					
16:50	0.50	17:20	CLN	Clean Out Hole	Pump 2 20 Bbl. Sweeps. Circulate 30 Minutes.					
17:20	2.67	20:00	TRIP	Tripping	POOH With Coil.					
20:00	0.50	20:30	GOP	General Operations	ND EQUIP. MOVE OVER. TURN WELL OVER TO FBC AND SALES.					
20:30	10.00	06:30	FBCK	Flowback Well	WELL ON PROD TO SALES.					

5H-1-46 TW BTR 3/27/2013 06:00 - 3/28/2013 06:00

API/UWI	State/Province	County	Field Name	Well Status	Tota	al Depth (ftKB)	Primary Job Type
43-013-51216		1	Black Tail Ridge	PRODUCING		11,918.0	Drilling & Completion
Time Log							

Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	1.00	07:00	CTRL	Crew Travel	CREW TRAVEL.
07:00	1.00	08:00	WKLL	Kill Well	PMP 140 BBLS HOT WTR. PRES TO 1200 PSI.
08:00	0.50	08:30	FBCK	Flowback Well	FLOW BACK TO PROD TANKS.
08:30	1.00	09:30	GOP	General Operations	ND FRAC VALVES. NU BOP. RU FLOOR.
09:30	2.50	12:00	WKLL	Kill Well	STING OUT OF LINER. PMP 300 BBLS (150 HOT, 150 COLD) AS CIRC TO PROD TANKS.X-OVER FOR 4.5"
12:00	1.00	13:00	GOP	General Operations	RU CSH CREW. WAITED ON LD MACHING.
13:00	0.50	13:30	GOP	General Operations	SPOT CATWALK AND RACKS.
13:30	2.00	15:30	PULT	Pull Tubing	POOH AS LD 4-1/2" CSG
15:30	0.75	16:15	GOP	General Operations	FLUSH CSG W/ 70 BBLS HOT WTR.
16:15	2.75	19:00	PULT	Pull Tubing	CONT POOH AS LD 4-1/2" CSG. 178-JTS TOTAL.
19:00	0.50	19:30	GOP	General Operations	RD CSG CREW. SWIFN W/ CSG TO TREATER.
19:30	10.50	06:00	LOCL	Lock Wellhead & Secure	CREW TRAVEL. WELL SECURE FOR NIGHT.

Sundry Number: 37567 API Well Number: 43013512160000

	STATE OF UTAH			FORM 9
ı	DEPARTMENT OF NATURAL RESO DIVISION OF OIL, GAS, AND		ì	5.LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-6444
SUNDR	Y NOTICES AND REPORT	rs on	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Uintah
	posals to drill new wells, significar reenter plugged wells, or to drill ho n for such proposals.			7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: 5H-1-46 BTR WASATCH
2. NAME OF OPERATOR: BILL BARRETT CORP				9. API NUMBER: 43013512160000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 312-8134 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2650 FNL 0284 FWL				COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: SWNW Section:	HP, RANGE, MERIDIAN: 06 Township: 04.0S Range: 05.0W	Meridian	: U	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDI	CATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME
Approximate date from this class.	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	□ F	RACTURE TREAT	☐ NEW CONSTRUCTION
4/1/2013	OPERATOR CHANGE		PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR		ENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF		SI TA STATUS EXTENSION	APD EXTENSION
Report Bate.	_		OTHER	OTHER: Lease
	WILDCAT WELL DETERMINATION	•	DIHER	
l .	completed operations. Clearly sh been earned for this well 1420H626444.			Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY May 07, 2013
NAME (PLEASE PRINT)	PHONE NU	JMBER	TITLE	
Venessa Langmacher	303 312-8172		Senior Permit Analyst	
SIGNATURE N/A			DATE 5/6/2013	

Division of Oil, Gas and Mining

Operator Change/Name Change Worksheet-for State use only

Effective Date:

11/1/2016

FORMER OPERATOR:	NEW OPERATOR:
Bill Barrett Corporation	Rig II, LLC
1099 18th Street, Suite 2300	1582 West 2600 South
Denver, CO 80202	Woods Cross, UT 84087
CA Number(s):	Unit(s):

WELL INFORMATION:

Well Name	Sec	TWN	RNG	API	Entity	Mineral	Surface	Type	Status
See Attached List									

OPERATOR CHANGES DOCUMENTATION:

1. Sundry or legal documentation was received from the **FORMER** operator on:

10/21/2016

2. Sundry or legal documentation was received from the NEW operator on:

10/21/2016

3. New operator Division of Corporations Business Number:

8256968-0160

REVIEW:

1. Surface Agreement Sundry from NEW operator on Fee Surface wells received on:

N/A

2. Receipt of Acceptance of Drilling Procedures for APD on:

10/21/2016

3. Reports current for Production/Disposition & Sundries:

11/2/2016

4. OPS/SI/TA well(s) reviewed for full cost bonding:

11/3/2016

5. UIC5 on all disposal/injection/storage well(s) approved on:

11/3/2016

6. Surface Facility(s) included in operator change:

None

7. Inspections of PA state/fee well sites complete on (only upon operators request):

11/3/2016

NEW OPERATOR BOND VERIFICATION:

1. Federal well(s) covered by Bond Number:

UTB000712

2. Indian well(s) covered by Bond Number:

LPM 922467

3.State/fee well(s) covered by Bond Number(s):

9219529

DATA ENTRY:

1. Well(s) update in the OGIS on:

11/7/2016

2. Entity Number(s) updated in OGIS on:

11/7/2016

3. Unit(s) operator number update in OGIS on:

N/A

4. Surface Facilities update in OGIS on:

N/A

5. State/Fee well(s) attached to bond(s) in RBDMS on:

11/7/2016

6. Surface Facilities update in RBDMS on:

N/A

COMMENTS:

Well Name	Sec	TWN	RNG	API Number	Entity	Mineral	Surface	Туре	Status
SWD 9-36 BTR	9	030S	060W	4301350646	18077	Indian	Fee	WD	Α
16-6D-46 BTR SWD	6	040S	060W	4301350781	18327	Indian	Fee	WD	Α
6-32-36 BTR SWD	32	030S	060W	4301350921	18329	Indian	Fee	WD	Α
LC TRIBAL 8-26D-47	26	040S	070W	4301334024		Indian	Indian	OW	APD
16-21D-37 BTR	21	030S	070W	4301350758		Indian	Fee	OW	APD
14-11D-37 BTR	11	030S	070W	4301350862		Indian	Fee	OW	APD
7-17D-46 BTR	17	040\$	060W	4301350883		Indian	Indian	OW	APD
14-12D-37 BTR	12	030S	070W	4301350894		Indian	Fee	OW	APD
1-18D-36 BTR	18	030S	060W	4301350922		Indian	Fee	OW	APD
13-2D-45 BTR	2	040S	050W	4301350931		Indian	Indian	OW	APD
5H-16-46 BTR	16	040S	060W	4301350992		Indian	Indian	OW	APD
9H-17-45 BTR	17	040S	050W	4301351098		Indian	Indian	OW	APD
13H-8-46 BTR UB	8	040S	060W	4301351124		Indian	Indian	OW	APD
BH-9-46 BTR	9	040S	060W	4301351140		Indian	Indian	ow	APD
_C TRIBAL 7-31D-37	31	030S	070W	4301351147		Indian	Fee	ow	APD
14-16D-45 BTR	16	040S	050W	4301351178		Indian	Indian	ow	APD
16-19D-37 BTR	19	030S	070W	4301351179		Indian	Fee	OW	APD
6-2D-45 BTR	2	040S	050W	4301351234		Indian	Indian	ow	APD
2-2D-45 BTR	2	040S	050W	4301351235		Indian	Indian	ow	APD
10-26-35 BTR	26	030S	050W	4301351248		Indian	Fee	OW	APD
C TRIBAL 1H-33-46	33	040S	060W	4301351257		Indian	Fee	ow	APD
_C TRIBAL 9-25D-46	25	040S	060W	4301351276		Indian	Indian	ow	APD
C TRIBAL 8H-30-45	30	040S	050W	4301351277	(8.7)	Indian	Indian	OW	APD
_C TRIBAL 16H-30-45	30	040S	050W	4301351279		Indian	Indian	OW	APD
_C TRIBAL 13-30D-45	30	040S	050W	4301351282		Indian	Indian	ow	APD
_C TRIBAL 16H-36-46	36	040S	060W	4301351291		Indian	Indian	OW	APD
C TRIBAL 13H-30-46	30	040S	060W	4301351321		Indian	Indian	OW	APD
C TRIBAL 13H-31-46	31	040S	060W	4301351326		Indian	Indian	OW	APD
_C TRIBAL 16-31D-46	31	040S	060W	4301351328		Indian	Indian	OW	APD
C TRIBAL 5H-26-47	26	040S	070W	4301351337		Indian	Indian	OW	APD
_C TRIBAL 5H-19-45	20	040S	050W	4301351349		Indian	Indian	OW	APD
C TRIBAL 16-36D-47	36	040S	070W	4301351363		Indian	Indian	OW	APD
15-4D-47 BTR	4	040S	070W	4301351377		Indian	Fee	OW	APD
16-23D-46 LC TRIBAL	23	040S	060W	4301351396		Indian	Fee	ow	APD
15-2D-36 BTR	2	030S	060W	4301351419		Indian	Fee	OW	APD
16-23D-37 BTR	23	030S	070W	4301351420	1	Indian	Fee	ow	APD
11-9D-47 BTR	9	040S	070W	4301351422		Indian	Fee	OW	APD
15-13D-47 BTR	13	040S	070W	4301351424		Indian	Indian	OW	APD
_C TRIBAL 15-19D-46	19	040S	060W	4301351426		Indian	Indian	OW	APD
16-13D-45 BTR	13	040S	050W	4301351428		Indian	Indian	OW	APD

14-12D-45 BTR	12	040S	050W	4301351444	Indian	Indian	OW	APD
16-14D-45 BTR	14	040S	050W	4301351445	Indian	Indian	OW	APD
5-13D-45 BTR	13	040S	050W	4301351446	Indian	Indian	OW	APD
LC TRIBAL 16-26D-46	26	040S	060W	4301351450	Indian	State	OW	APD
LC TRIBAL 10-20D-40	34	0408	060W	4301351451				
16-12D-45 BTR	12	040S	050W	4301351451	Indian Indian	State Indian	OW	APD
8-12D-45 BTR	12	040S	050VV	4301351452			OW	APD
LC TRIBAL 1-35D-46	35	040S	060W		Indian	Indian	OW	APD
16-25D-37 BTR		0405	070W	4301351454	Indian	Fee	OW	APD
LC TRIBAL 13H-29-46	25			4301351455	Indian	Fee	OW	APD
	28	0408	060W	4301351462	Indian	Fee	OW	APD
LC TRIBAL 14-30D-37	30	0308	070W	4301351494	Indian	Fee	OW	APD
7-13D-45 BTR	13	0408	050W	4301351497	Indian	Indian	OW	APD
LC TRIBAL 4H-35-46	35	0408	060W	4301351515	Indian	Fee	OW	APD
LC TRIBAL 13H-19-46	19	040\$	060W	4301351543	Indian	Indian	OW	APD
16-26D-37 BTR	26	030S	070W	4301351598	Indian	Fee	OW	APD
LC TRIBAL 16-31D-37	31	030\$	070W	4301351610	Indian	Fee	OW	APD
5-4-35 BTR	4	030S	050W	4301351613	Indian	Fee	OW	APD
LC TRIBAL 16-31D-47	31	040S	070W	4301351616	Indian	Indian	OW	APD
LC TRIBAL 13H-31-47	31	040S	070W	4301351617	Indian	Indian	OW	APD
LC TRIBAL 13-32D-47	32	040S	070W	4301351619	Indian	Indian	OW	APD
LC TRIBAL 16H-32-47	32	040S	070W	4301351620	Indian	Indian	OW	APD
LC TRIBAL 1-32D-47	32	040S	070W	4301351624	Indian	Indian	OW	APD
LC TRIBAL 4H-32-47	32	040S	070W	4301351625	Indian	Indian	OW	APD
LC TRIBAL 13-28D-47	28	040S	070W	4301351627	Indian	Indian	OW	APD
LC TRIBAL 13H-29-47	28	040S	070W	4301351628	Indian	Indian	OW	APD
LC TRIBAL 16H-28-47	28	040S	070W	4301351629	Indian	Indian	OW	APD
LC TRIBAL 1-28D-47	28	040S	070W	4301351639	Indian	Indian	OW	APD
LC TRIBAL 1H-27-47	28	040S	070W	4301351640	Indian	Indian	OW	APD
LC TRIBAL 4H-28-47	28	040S	070W	4301351641	Indian	Indian	OW	APD
LC TRIBAL 7-25D-58	25	050S	W080	4301351643	Indian	Indian	OW	APD
LC TRIBAL 6-25D-58	25	050S	080W	4301351644	Indian	Indian	OW	APD
LC TRIBAL 13H-24-58	24	050S	W080	4301351645	Indian	Indian	OW	APD
LC TRIBAL 16-24D-58	24	050S	080W	4301351646	Indian	Indian	OW	APD
LC Tribal 8-23D-46	23	040S	060W	4301351654	Indian	Fee	OW	APD
LC Tribal 16-35D-45	35	040S	050W	4301351656	Indian	Fee	OW	APD
LC Tribal 13H-35-45	35	040S	050W	4301351657	Indian	Fee	ow	APD
LC Tribal 16-36D-45	36	040S	050W	4301351658	Indian	Fee	ow	APD
LC Tribal 13H-36-45	36	040S	050W	4301351659	Indian	Fee	OW	APD
LC Tribal 5-36D-45	36	0408	050W	4301351661	Indian	Fee	OW	APD
LC Tribal 8-26D-46	26	040\$	060W	4301351663	Indian	Fee	OW	APD
3-29D-36 BTR	29	0308	060W	4301351665	Indian	Fee	OW	APD

LC Tribal 5-35D-45	35	040S	050W	4301351666	Indian	Fee	OW	APD
_C Tribal 5-24D-46	24	0408	060W	4301351668	Indian	Indian	ow	APD
_C TRIBAL 6-12D-58	12	0508	080W	4301351696	Indian	Indian	OW	APD
LC TRIBAL 8-12D-58	12	050S	080W	4301351697	Indian	Indian	OW	APD
.C TRIBAL 16H-22-47	21	040S	070W	4301351700	Indian	Indian	OW	APD
5-25D-37 BTR	25	030S	070W	4301351803	Indian	Fee	OW	APD
8-3D-36 BTR	3	0308	060W	4301351804	Indian	Fee	OW	APD
14-26D-37 BTR	26	0308	070W	4301351805	Indian	Fee	OW	APD
9-4-35 BTR	4	0308	050W	4301351806	Indian	Fee	ow	APD
11-4D-35 BTR	4	030S	050W	4301351807	Indian	Fee	OW	APD
16-27D-37 BTR	27	0308	070W	4301351808	Indian	Fee	OW	APD
14-27D-37 BTR	27	0308	070W	4301351809	Indian	Fee	OW	APD
14-16D-46 BTR	16	040S	060W	4301351812	Indian	Indian	OW	APD
_C Tribal 16-35D-48	35	040S	080W	4301351847	Indian	Indian	OW	APD
LC Tribal 13H-35-48	35	040S	080W	4301351848	Indian	Indian	OW	APD
_C Tribal 13-2D-58	11	050S	080W	4301351850	Indian	Indian	OW	APD
5-13D-36 BTR	13	0308	060W	4301351862	Indian	Fee	OW	APD
5-8D-36 BTR	8	0308	060W	4301351871	Indian	Fee	OW	APD
16-1D-36 BTR	1	0308	060W	4301351872	Indian	Fee	ow	APD
3-18D-46 BTR	18	040S	060W	4301351897	Indian	Fee	OW	APD
_C Tribal 5-36D-46	36	0408	060W	4301351905	Indian	Indian	OW	APD
LC Tribal 5-26D-45	26	040S	050W	4301351907	Indian	Indian	OW	APD
14-13D-45 BTR	13	040S	050W	4301351974	Indian	Indian	OW	APD
14-34D-46 DLB	34	040S	060W	4301351975	Indian	Fee	OW	APD
LC Tribal 5-21D-45	21	0408	050W	4301352001	Indian	Indian	OW	APD
_C Tribal 8-22D-45	22	0408	050W	4301352002	Indian	Indian	OW	APD
_C Tribal 8-25D-45	25	0408	050W	4301352007	Indian	Indian	OW	APD
LC Tribal 16-25D-45	25	040S	050W	4301352008	Indian	Indian	OW	APD
LC Tribal 16-22D-45	22	040S	050W	4301352009	Indian	Indian	OW	APD
LC Tribal 16-26D-45	26	040S	050W	4301352010	Indian	Indian	OW	APD
LC Tribal 14-31D-37	31	0308	070W	4301352016	Indian	Fee	OW	APD
5-12D-45 BTR	12	040S	050W	4301352030	Indian	Indian	ow	APD
LC Tribal 9-20D-45	20	040S	050W	4301352031	Indian	Indian	OW	APD
LC Tribal 13-35D-47	35	0408	070W	4301352055	Indian	Indian	ow	APD
C Tribal 1-23D-47	23	040S	070W	4301352057	Indian	Indian	ow =	APD
9-17D-46 BTR	17	040S	060W	4301352059	Indian	Indian	OW	APD
11-18D-46 BTR	18	040S	060W	4301352060	Indian	Indian	OW	APD
9-10D-47 BTR	10	0408	070W	4301352092	Indian	Fee	OW	APD
LC Tribal 1-17D-47	17	0408	070W	4301352096	Indian	Fee	OW	APD
7-35D-37 BTR	35	0308	070W	4301352115	Indian	Fee	OW	APD
14-25D-37 BTR	25	0308	070W	4301352116	Indian	Fee	OW	APD

LC Tribal 5-25-46	25	040S	060W	4301352126	Indian	Indian	OW	APD
8-33D-35 BTR	33	030S	050W	4301352161	Indian	Fee	OW	APD
5-4D-36 BTR	4	030S	060W	4301352175	Indian	Fee	OW	APD
'-4D-36 BTR	4	030S	060W	4301352176	Indian	Fee	OW	APD
C Tribal 4-36D-47	36	040S	070W	4301352186	Indian	Indian	OW	APD
.C Tribal 4-22D-46	22	040S	060W	4301352944	Indian	Indian	OW	APD
.C Tribal 16-22D-46	22	040S	060W	4301352945	Indian	Indian	OW	APD
.C Tribal 11-19D-46	19	040S	060W	4301352946	Indian	Indian	OW	APD
.C Tribal 7-20D-45	20	040S	050W	4301352947	Indian	Indian	OW	APD
5-11D-35 BTR	11	030S	050W	4301353056	Indian	Fee	OW	APD
3-11D-35 BTR	11	030S	050W	4301353057	Indian	Fee	OW	APD
3TR 16-36D-37	36	030S	070W	4301353059	Indian	Fee	OW	APD
I-29D-35 BTR	30	030S	050W	4301353060	Indian	Fee	ow	APD
-30D-35 BTR	30	030S	050W	4301353061	Fee	Fee	OW	APD
.C TRIBAL 3-23D-46	23	040S	060W	4301353066	Indian	State	ow	APD
C Tribal 14-23D-46	23	040S	060W	4301353067	Indian	State	OW	APD
.C Tribal 13-25D-46	25	040S	060W	4301353068	Indian	Indian	OW	APD
C Tribal 14-26D-46	26	040S	060W	4301353069	Indian	State	OW	APD
C Tribal 5-26D-46	26	040S	060W	4301353070	Indian	State	OW	APD
C Tribal 11-35D-45	35	040S	050W	4301353071	Indian	State	OW	APD
C Tribal 7-35D-45	35	040S	050W	4301353072	Indian	State	OW	APD
C Tribal 3-35D-45	35	040S	050W	4301353075	Indian	State	OW	APD
C Tribal 14-36D-45	36	040S	050W	4301353076	Indian	State	OW	APD
C Tribal 13-36D-45	36	040S	050W	4301353077	Indian	State	OW	APD
C Tribal 10-36D-45	36	040S	050W	4301353078	Indian	State	OW	APD
.C Tribal 8-36D-45	36	040S	050W	4301353079	Indian	State	OW	APD
.C Tribal 6-36D-45	36	040S	050W	4301353080	Indian	State	OW	APD
.C Tribal 1-34D-46	34	040S	060W	4301353081	Indian	State	OW	APD
.C Tribal 9-27D-46	27	040S	060W	4301353082	Indian	State	OW	APD
.C Tribal 13-35D-45	35	040S	050W	4301353083	Indian	State	OW	APD
C Tribal 8-35D-45	35	040S	050W	4301353084	Indian	State	OW	APD
.C Tribal 15-35D-45	35	040S	050W	4301353085	Indian	State	OW	APD
C Tribal 12-25D-45	25	040S	050W	4301353122	Indian	Indian	OW	APD
C Tribal 14-25D-45	25	040S	050W	4301353123	Indian	Indian	OW	APD
C Tribal 10-25D-45	25	040S	050W	4301353124	Indian	Indian	ow	APD
C Tribal 11-26-45	26	040S	050W	4301353125	Indian	Indian	OW	APD
C Tribal 13-26D-45	26	040S	050W	4301353126	Indian	Indian	OW	APD
C Tribal 7-31D-46	31	040S	060W	4301353127	Indian	Indian	OW	APD
.C Tribal 7-19D-45	19	040S	050W	4301353128	Indian	Indian	OW	APD
.C Tribal 5-19D-45	19	040S	050W	4301353130	Indian	Indian	OW	APD
.C Tribal 7-25D-46	25	040S	060W	4301353132	Indian	Indian	OW	APD

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_C Tribal 7-24D-46	24	0408	060W	4301353134		Indian	Indian	OW	APD
.C Tribal 14-31D-46	31	040S	060W	4301353135		Indian	Indian	OW	APD
C Tribal 14-30D-46	30	040S	060W	4301353136		Indian	Indian	OW	APD
13-4-35 BTR SWD	4	030S	050W	4301353293		Fee	Fee	OW	APD
.C FEE 14-26D-47	26	040S	070W	4301353294	1	Fee	Indian	OW	APD
C Fee 5-25D-47	25	040S	070W	4301353295		Fee	Indian	OW	APD
7-35-46 LC SWD	35	040S	060W	4301353296		Fee	Fee	OW	APD
.C Fee 1H-33-47	32	040S	070 W	4301353309		Fee	Indian	ow	APD
_C FEE 14-2D-58	2	050S	W080	4301353312		Fee	Indian	OW	APD
C FEE 13H-21-47	21	040S	070W	4301353313		Fee	Indian	OW	APD
C Fee 16-21D-47	21	040S	070W	4301353326		Fee	Indian	OW	APD
6-7D-46 BTR	7	040S	060W	4301353328		Fee	Indian	OW	APD
C Fee 15-26D-47	26	040S	070W	4301353331		Fee	Indian	OW	APD
.C Fee 4-24D-47	23	040S	070W	4301353332		Fee	Indian	OW	APD
.C Fee 5-34D-47	34	040S	070W	4301353333		Fee	Indian	OW	APD
.C Fee 5-35D-47	35	040S	070W	4301353334	:	Fee	Indian	OW	APD
3-34D-47 LC Fee	34	040S	070W	4301353337		Fee	Indian	OW	APD
4-35D-35 BTR	35	030S	050W	4301352120		Fee	Fee	OW	DRL
-17D-46 BTR	17	040S	060W	4301351078		Indian	Indian	OW	OPS
-34D-35 BTR	34	030S	050W	4301351187		Indian	Fee	OW	OPS
5-10D-45 BTR	10	040S	050W	4301351221		Indian	Indian	OW	OPS
-3D-45 BTR	3	040S	050W	4301351810		Indian	Indian	OW	OPS
-34D-35 BTR	34	030S	050W	4301352117		Fee	Fee	OW	OPS
-35D-35 BTR	35	030S	050W	4301352118		Fee	Fee	OW	OPS
-2D-46 BTR	2	040S	060W	4301353086		Indian	Fee	OW	OPS
'-21-46 DLB	21	040S	060W	4301333567	16526	Indian	Indian	OW	P
.C TRIBAL 1H-27-46	27	040S	060W	4301333568	18175	Indian	Fee	GW	P
'-29-46 DLB	29	040S	060W	4301333584	17603	Indian	Fee	GW	P
C TRIBAL 12H-28-46	28	0408	060W	4301333631	18132	Indian	Indian	GW	P
.C TRIBAL 13H-21-46	21	0408	060W	4301333632	18107	Indian	Indian	GW	 P
2-36-36 BTR	36	030S	060W	4301333638	16336	Indian	Fee	GW	P
i-5-46 BTR	5	0408	060W	4301333639	16542	Indian	Fee	OW	P
5-23-36 BTR	23	0308	060W	4301333642	16675	Indian	Fee	GW	P
4-29-36 BTR	29	0308	060W	4301333643	16725	Indian	Fee	ow	P
4-30-36 BTR	30	0308	060W	4301333644	16701	Indian	Fee	GW	<u>'</u>
'-20-46 DLB	20	040S	060W	4301333657	16584	Indian	Indian	OW	'P
.C TRIBAL 5-21D-46	21	0408	060W	4301333658	18887	Indian	Indian	OW	P
-20-46 DLB	20	0408	060W	4301333659	18750	Indian	Indian	GW	P
.C TRIBAL 13H-20-46	20	0408	060W	4301333678	17979	Indian	Indian	GW	P
14-7-46 BTR	7	0408	060W	4301333806	16890	Indian	Indian	GW	P
	1.	0.00	100011	TOO OOOOOO	10000	HIMIAII	HIGHAIL	UVV	1 1-1

1-5-45 BTR	5	040S	050W	4301333868	16931	Indian	Indian	OW	Р
5-16-36 BTR	16	030S	060W	4301333970	17195	Indian	Fee	ow	P
5-29-36 BTR	29	0308	060W	4301333972	17557	Indian	Fee	OW	P
4-30-36 BTR	30	030S	060W	4301333973	17249	Indian	Fee	OW	P
7-19-46 DLB	19	040S	060W	4301334004	19018	Indian	Indian	OW	Р
5-25-36 BTR	25	0308	060W	4301334021	17126	Fee	Fee	OW	P
5-4-45 BTR	4	0408	050W	4301334089	17507	Indian	Indian	oW	Р
13-2-46 BTR	2	040S	060W	4301334090	18618	Indian	Indian	ow	Р
2-3-45 BTR	3	040S	050W	4301334099	17932	Indian	Indian	OW	Р
7-6-45 BTR	6	040S	050W	4301334100	17653	Indian	Indian	OW	Р
1-9-45 BTR	9	0408	050W	4301334101	17910	Indian	Indian	OW	Р
8-10-45 BTR	10	040S	050W	4301334102	17530	Indian	Indian	ow	Р
7-17-45 BTR	17	040S	050W	4301334104	17933	Indian	Indian	OW	Р
16-7-45 BTR	7	040S	050W	4301334111	17665	Indian	Indian	OW	Р
15-18-45 BTR	18	040S	050W	4301334112	17832	Indian	Indian	ow	P
6-12-46 BTR	12	0408	060W	4301334114	17964	Indian	Indian	ow	P
5-13-46 BTR	13	040S	060W	4301334115	17833	Indian	Indian	OW	Р
16-26-36 BTR	26	030S	060W	4301334132	18028	Indian	Fee	ow	P
1-23-36 BTR	23	030S	060W	4301334136	17722	Indian	Fee	OW	Р
15-10-36 BTR	10	030S	060W	4301334277	17419	Indian	Fee	ow	Р
14-5-46 BTR	5	040S	060W	4301350307	17624	Fee	Fee	ow	Р
14X-22-46 DLB	22	040S	060W	4301350351	17604	Indian	Indian	ow	Р
16-13-36 BTR	13	030S	060W	4301350372	17853	Indian	Fee	ow	Р
5-33-46 DLB	33	040S	060W	4301350397	17765	Indian	Fee	OW	Р
5-34-46 DLB	34	040S	060W	4301350415	17801	Indian	State	GW	Р
LC FEE 12H-32-46	32	040S	060W	4301350431	18003	Fee	Fee	OW	Р
1-13D-47 BTR	13	040S	070W	4301350445	18205	Indian	Fee	OW	Р
16-8D-45 BTR	8	040S	050W	4301350466	18799	Indian	Indian	OW	Р
7-13D-46 BTR	13	040S	060W	4301350470	18076	Indian	Indian	OW	Р
14-8D-45 BTR	8	040S	050W	4301350567	18207	Indian	Indian	OW	Р
14-5D-45 BTR	5	040S	050W	4301350568	18108	Indian	Indian	OW	Р
16-31D-36 BTR	31	030S	060W	4301350573	18004	Indian	Fee	OW	P
5-7D-46 BTR	7	040S	060W	4301350574	18176	Indian	Indian	OW	Р
LC TRIBAL 13H-33-46	34	040S	060W	4301350575	18223	Indian	State	OW	Р
5-8-45 BTR	8	040S	050W	4301350607	18279	Indian	Indian	OW	Р
16-6D-45 BTR	6	040S	050W	4301350610	18177	Indian	Indian	OW	P
5-18D-45 BTR	18	040S	050W	4301350611	18300	Indian	Indian	OW	Р
7-26-37 BTR	26	030\$	070W	4301350641	18131	Indian	Fee	OW	Р
3-11D-36 BTR	11	030S	060W	4301350642	18299	Indian	Fee	OW	Р
16-1D-46 BTR	1	040S	060W	4301350675	18525	Indian	Indian	ow	Р
14-3-45 BTR	3	040S	050W	4301350676	18363	Indian	Indian	ow	Р

4-17D-45 BTR	17	040S	050W	4301350687	18517	Indian	Indian	OW	Р
5-6D-45 BTR	6	040S	050W	4301350688	18726	Indian	Indian	OW	P
7-7D-45 BTR	7	040S	050W	4301350689	18380	Indian	Indian	OW	P
14-10D-45 BTR	10	040S	050W	4301350754	18447	Indian	Indian	OW	P
14-9D-45 BTR	9	040S	050W	4301350755	18379	Indian	Indian	OW	P
13-16D-36 BTR	16	030S	060W	4301350757	18206	Indian	State	OW	Р
5-9D-36 BTR	9	030S	060W	4301350843	18381	Indian	Fee	OW	P
16-5D-46 BTR	5	040S	060W	4301350844	18280	Fee	Fee	OW	Р
5-27D-37 BTR	27	030S	070W	4301350847	18526	Indian	Fee	OW	Р
7-4D-45 BTR	4	040S	050W	4301350884	18562	Indian	Indian	OW	Р
2-16D-45 BTR	16	040S	050W	4301350899	18619	Indian	Indian	OW	Р
16-10D-45 BTR	10	040S	050W	4301350902	18725	Indian	Indian	OW	P
5-2D-36 BTR	2	030S	060W	4301350913	18886	Indian	Fee	ow	Р
13H-27-36 BTR	27	030S	060W	4301350918	18445	Indian	State	ow	Р
8-16D-46 BTR	16	040S	060W	4301350953	19027	Indian	Indian	OW	Р
16-16D-46 BTR	16	040S	060W	4301350956	19028	Indian	Indian	OW	Р
16-9D-45 BTR	9	040S	050W	4301350962	18662	Indian	Indian	OW	Р
14-31D-36 BTR	31	030S	060W	4301350973	18524	Indian	Fee	OW	Р
5-10D-36 BTR	10	030S	060W	4301350978	18989	Indian	Fee	OW	Р
1-32D-36 BTR	32	030S	060W	4301350979	18648	Indian	Fee	OW	Р
16-12D-36 BTR	12	030S	060W	4301350980	18748	Indian	Fee	ow	Р
2-18D-45 BTR	18	040S	050W	4301350991	18776	Indian	Indian	OW	Р
3-1-46 BTR	1	040S	060W	4301351017	18777	Indian	Fee	ow	Р
10-5-45 BTR	5	040S	050W	4301351062	18724	Indian	Indian	OW	Р
12-4D-45 BTR	4	040S	050W	4301351063	18813	Indian	Indian	ow	Р
1-10D-45 BTR	10	040S	050W	4301351064	18966	Indian	Indian	ow	Р
16-2D-46 BTR	2	040S	060W	4301351079	18830	Indian	Indian	OW	Р
9H-4-45 BTR	4	040S	050W	4301351092	18814	Indian	Indian	OW	Р
12-17-45 BTR	17	040S	050W	4301351097	18984	Indian	Indian	OW	Р
5-9D-46 BTR	9	040S	060W	4301351109	19313	Indian	Fee	OW	Р
14-9D-36 BTR	9	030S	060W	4301351144	19004	Indian	Fee	OW	Р
5-31D-36 BTR	31	030S	060W	4301351146	18691	Indian	Fee	OW	Р
4-9D-45 BTR	9	040S	050W	4301351157	18883	Indian	Indian	OW	Р
8-12D-46 BTR	12	040S	060W	4301351159	18911	Indian	Indian	OW	Р
LC TRIBAL 16-23D-47	23	040S	070W	4301351180	18617	Indian	Indian	OW	Р
14-7D-45 BTR	7	040S	050W	4301351222	18949	Indian	Indian	OW	Р
5-16D-45 BTR	16	040S	050W	4301351223	18987	Indian	Indian	OW	Р
4-5D-45 BTR	5	040S	050W	4301351242	18882	Indian	Indian	OW	P
LC TRIBAL 16H-19-45	19	0408	050W	4301351278	18627	Indian	Indian	OW	Р
LC TRIBAL 13-19D-45	19	040S	050W	4301351280	18628	Indian	Indian	OW	Р
LC TRIBAL 5-30D-45	30	040S	050W	4301351281	19448	Indian	Indian	OW	Р

LC TRIBAL 15-24D-46	24	040S	060W	4301351283	18626	Indian	Indian	OW	Р
LC TRIBAL 13H-24-46	19	040S	050W	4301351289	18629	Indian	Indian	ow	Р
7-16-47 BTR	16	040S	070W	4301351296	18950	Indian	Fee	ow	P
14-18D-45 BTR	18	040S	050W	4301351313	19005	Indian	Indian	ow	Р
LC TRIBAL 16-30D-46	30	040S	060W	4301351320	19006	Indian	Indian	ow	Р
LC TRIBAL 5-20D-45	20	040S	050W	4301351331	19449	Indian	Indian	ow	Р
11-8D-46 BTR	8	040S	060W	4301351336	19314	Indian	Indian	OW	Р
5-7D-45 BTR	7	040S	050W	4301351350	18951	Indian	Indian	ow	Р
7-5-35 BTR	5	030S	050W	4301351599	19078	Indian	Fee	OW	P
13-5D-35 BTR	5	030S	050W	4301351600	18996	Indian	Fee	ow	Р
11-5D-35 BTR	5	030S	050W	4301351601	19061	Fee	Fee	OW	Р
15-5D-35 BTR	5	030S	050W	4301351602	19062	Fee	Fee	OW	Р
9-5D-35 BTR	5	030S	050W	4301351609	19029	Indian	Fee	ow	Р
3-5D-35 BTR	5	030S	050W	4301351638	19079	Indian	Fee	OW	Р
7-8-46 BTR	8	040S	060W	4301351702	19315	Indian	Indian	ow	Р
7-30-46 DLB	30	040S	060W	4301351703	18997	Fee	Indian	OW	Р
3-13D-46 BTR	13	040S	060W	4301351718	18881	Indian	Indian	ow	Р
2-13D-46 BTR	13	040S	060W	4301351719	18885	Indian	Indian	OW	Р
12-12D-46 BTR	12	040S	060W	4301351720	18867	Indian	Indian	OW	P
10-12D-46 BTR	12	040S	060W	4301351721	18856	Indian	Indian	ow	Р
11-11D-47 BTR	11	040S	070W	4301352091	19633	Fee	Fee	ow	P
7-12D-47 BTR	12	040S	070W	4301352094	19600	Indian	Fee	ow	Р
5-12D-47 BTR	12	040S	070W	4301352095	19634	Indian	Fee	ow	Р
14-33D-35 BTR	33	030S	050W	4301352162	19450	Indian	Fee	ow	Р
16-33D-35 BTR	33	030S	050W	4301352163	19451	Indian	Fee	ow	Р
14-22-46 DLB	22	040S	060W	4301333660	17604	Indian	Indian	D	PA
13H-31-36 BTR	31	0308	060W	4301350465	18485	Indian	Fee	OW	PA
16X-23D-36 BTR	23	030S	060W	4301350623	18007	Indian	State	OW	PA
8-6-45 BTR	6	040S	050W	4301350900	18561	Indian	Indian	OW	PA
13-13-36 BTR	13	030S	060W	4301350919	18364	Indian	Fee	OW	PA
7-28-46 DLB	28	040S	060W	4301333569	16460	Indian	Indian	OW	S
5-21-36 BTR	21	030S	060W	4301333641	16674	Indian	Fee	GW	S
13-26-36 BTR	26	030S	060W	4301333980	17569	Indian	Fee	OW	S
14-1-46 BTR	1	040S	060W	4301334113	18516	Indian	Indian	OW	S
16-21-36 BTR	21	030S	060W	4301334130	17721	Indian	Fee	OW	S
14-21-36 BTR	21	030S	060W	4301334131	18006	Indian	Fee	OW	S
7-16-36 BTR	16	030\$	060W	4301334133	17834	Indian	Fee	OW	s
1-30-36 BTR	30	0308	060W	4301334134	17905	Indian	Fee	OW	S
16-30-36 BTR	30	0308	060W	4301334135	18005	Indian	Fee	OW	S
3-23-36 BTR	23	0308	060W	4301334137	17860	Indian	Fee	OW	S
16-16-36 BTR	16	030S	060W	4301334138	17666	Indian	Fee	OW	S

4-26-36 BTR	26	030S	060W	4301334139	17620	Fee	Fee	OW	S
9-11-36 BTR	11	030S	060W	4301334276	17451	Indian	Fee	OW	S
3-36-36 BTR	36	030S	060W	4301350398	17955	Indian	Fee	OW	S
7-10-36 BTR	10	030S	060W	4301350437	18052	Indian	Fee	OW	S
16-12D-46 BTR	12	040S	060W	4301350467	18051	Indian	Indian	OW	S
13H-13-46 BTR	13	040\$	060W	4301350468	18208	Indian	Indian	OW	S
13-12-46 BTR	12	040S	060W	4301350469	18233	Indian	Indian	OW	S
14-8D-36 BTR	8	030S	060W	4301350612	18163	Indian	Fee	OW	S
14-7D-36 BTR	7	030S	060W	4301350613	18330	Indian	Fee	OW	S
16-9-36 BTR	9	0308	060W	4301350645	18078	Indian	Fee	OW	S
7-27-37 BTR	27	030S	070W	4301350647	18090	Indian	Fee	OW	S
16-12D-37 BTR	12	030S	070W	4301350785	18446	Indian	Fee	OW	S
14-21D-37 BTR	21	030S	070W	4301350859	18548	Indian	Fee	OW	S
10-18D-36 BTR	18	030S	060W	4301350915	18884	Indian	Fee	OW	S
5-27D - 36	27	030S	060W	4301350917	18482	Indian	State	OW	S
10-36D-36 BTR	36	030S	060W	4301351005	18523	Indian	Fee	OW	S
14-6D-45 BTR	6	040S	050W	4301351158	18967	Indian	Indian	OW	S
5H-1-46 BTR UTELAND BUTTE	6	040S	050W	4301351215	18728	Indian	Indian	OW	S
5H-1-46 BTR WASATCH	6	040S	050W	4301351216	18727	Indian	Indian	OW	S
1-25D-36 BTR	25	030S	060W	4301351294	18798	Indian	Fee	OW	S
5-5D-35 BTR	5	030S	050W	4301351605	19055	Indian	Fee	OW	S
16-23-36 BTR	23	030S	060W	4301333971	17182	Indian	Fee	OW	TA
LC TRIBAL 14-23D-47	23	040S	070W	4301334022	18616	Indian	Indian	OW	TA
5-32D-36 BTR	32	030S	060W	4301350756	18328	Indian	Fee	OW	TA



October 20, 2016

RECEIVED

OCT 21 2016

Re: Bill Barrett Corporation Transfer to New Operator

DIV. OF OIL, GAS & MINING

Dear Ms. Medina:

Attached please find the change of operation Form 9, Form 5's and Request to Transfer APD formchanging the operator from Bill Barrett Corporation to RIG II, LLC, effective 11/1/2016. Badlands Energy – Utah, LLC will be a sub-operator.

New Operator Contact information:

RIG II, LLC 1582 West 2600 South Woods Cross, Utah 84087-0298 Telephone:(801) 683-4245 Fax:(801) 298-9889

Upon reviewing the attached, please contact myself with any questions at 303-312-8115.

Sincerely,

Bill Barrett Corporation

Brady Riley Permit Analyst

STATE OF UTAH FORM 9 **DEPARTMENT OF NATURAL RESOURCES** 5. LEASE DESIGNATION AND SERIAL NUMBER: DIVISION OF OIL, GAS AND MINING (see attached well list) 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: SUNDRY NOTICES AND REPORTS ON WELLS N/A 7, UNIT or CA AGREEMENT NAME: Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals. 1. TYPE OF WELL 8. WELL NAME and NUMBER OIL WELL 🔽 GAS WELL (see attached well list) 2. NAME OF OPERATOR: 9. API NUMBER RIG II, LLC 3. ADDRESS OF OPERATOR PHONE NUMBER: 10. FIELD AND POOL, OR WILDCAT: 1582 West 2600 South (801) 683-4245 STATE UT ZIP 84087 Wood Cross 4. LOCATION OF WELL FOOTAGES AT SURFACE: (see attached well list) COUNTY: QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: STATE: UTAH CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA 11. TYPE OF SUBMISSION TYPE OF ACTION ACIDIZE REPERFORATE CURRENT FORMATION NOTICE OF INTENT (Submit in Duplicate) ALTER CASING FRACTURE TREAT SIDETRACK TO REPAIR WELL Approximate date work will start; CASING REPAIR **NEW CONSTRUCTION** TEMPORARILY ABANDON 11/1/2016 CHANGE TO PREVIOUS PLANS OPERATOR CHANGE TUBING REPAIR CHANGE TUBING PLUG AND ABANDON VENT OR FLARE SUBSEQUENT REPORT CHANGE WELL NAME PLUG BACK WATER DISPOSÁL (Submit Original Form Only) CHANGE WELL STATUS PRODUCTION (START/RESUME) WATER SHUT-OFF Date of work completion: COMMINGLE PRODUCING FORMATIONS RECLAMATION OF WELL SITE OTHER: CONVERT WELL TYPE **RECOMPLETE - DIFFERENT FORMATION** 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. RIG II, LLC IS SUBMITTING THIS SUNDRY AS NOTIFICATION THAT THE WELLS LISTED ON THE ATTACHED LIST HAVE BEEN SOLD TO-Rig II, LLC BY BILL BILL BARRETT CORPORATION EFFECTIVE 11/1/2016. PLEASE REFER ALL FUTURE CORRESPONDENCE TO THE ADDRESS BELOW. RIG II, LLC 1582 West 2600 South Woods Cross, Utah 84087-0298 801-683-4245 (STATE/FEE BOND # 9219529/ BLM BOND # UTB000712/ BIA BOND # LPM9224670) BILL BARRETT CORPORATION NOILS RIG II, LLC MAME (PLEASE PRINT) _ NAME (PLEASE PRINT) SIGNATURE SIGNATURE EH&S, Government and Regulatory Affairs Jesse McSwain Manager NAME (PLEASE PRINT) 1012016

APPROVED

NOV 0 7 2016

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STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

Request to Transfer Application or Permit to Drill

	(This form should ac	ccompany a Sundr	y Notice, Form 9, reque	esting APD transfer)		
Well	name:	(See attached li	st)			
API ı	number:					
Loca	ation:	Qtr-Qtr:	Section:	Township: Range:		
Com	pany that filed original application:	Bill Barrett Corp	oration			
Date	original permit was issued:					
Com	pany that permit was issued to:	Bill Barrett Cor	poration			
Check one		Des	ired Action:			
	Transfer pending (unapproved) App					
	The undersigned as owner with legal r submitted in the pending Application for owner of the application accepts and a	or Permit to Dril	l, remains valid ar	nd does not require revision. The	new	
✓	Transfer approved Application for F	ermit to Drill t	o new operator			
	The undersigned as owner with legal r information as submitted in the previous revision.				re	
Folio	owing is a checklist of some items rel	ated to the ap	plication, which s	should be verified.	Yes	No
If loc	ated on private land, has the ownership	changed?			✓	
	if so, has the surface agreement been	updated?				✓
	e any wells been drilled in the vicinity of tirements for this location?	the proposed w	rell which would af	fect the spacing or siting		✓
	e there been any unit or other agreemen osed well?	ts put in place t	hat could affect th	e permitting or operation of this		✓
	there been any changes to the access osed location?	route including	ownership or righ	t-of-way, which could affect the		✓
Has t	the approved source of water for drilling	changed?				✓
	e there been any physical changes to the s from what was discussed at the onsite		on or access route	which will require a change in		✓
Is bo	nding still in place, which covers this pro	posed well? B	ond No. 9219529-UDOGM/U	JTB000712-BLM / LPM9224670-BIA	1	
shou nece	desired or necessary changes to either a ld be filed on a Sundry Notice, Form 9, o ssary supporting information as required	or amended Ap	plication for Permi			red,
	e (please print) Jesse McSwain		Title Manager	2110		
_	esenting (company name) RIG II, LLC		Date 10 0	<u> 114 </u>		
rtepi	cooming (company name)			· · · · · · · · · · · · · · · · · · ·		

The person signing this form must have legal authority to represent the company or individual(s) to be listed as the new operator on the Application for Permit to Drill.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS AND MINING

•	TRANSFER OF AUTHORITY TO INJECT								
Well Name and Number 6-32-36 BTR SWD		4			API Number 4301350921				
Location of Well				DUQUENOE	Field or Unit Name CEDAR RIM				
Footage: 1628 FNL 1553 FWL QQ, Section, Township, Range: SENW	32	3S	6W	County : DUCHENSE State : UTAH	Lease Designation and Number 2OG0005608				

EFFECTIVE DATE OF TRANSFER: 11/1/2016

CURRENT OP	PERATOR	
Company:	BILL BARRETT CORPORATION	Name: Duane Zavadil
Address:	1099 18th Street Ste 2300	Signature: 2nCd
	city DENVER state CO zip 80202	Senior Vice President - Title: EH&S, Government and Regulatory Affairs
Phone:	(303) 293-9100	Date: 10 20 16
Comments	· · · · · · · · · · · · · · · · · · ·	

Address: 1582 West 2600 South Signature: Signature: Manager	Company: RIG II, LLC Name: Jesse McSwain	
10/2 . 111	1593 West 2000 Courts	R:
(004) 002 4045	city Wood Cross state UT zip 84087 Title: Manager	
Phone: (801) 683-4245 Date: 10 LO 10	Phone: (801) 683-4245 Date: 10 20 10	

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Transfer approved by:

Approval Date: ///3//L

Comments:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

	TRANSFER OF AL	JTHORITY TO INJECT	T
Well Name and 16-6D-46 BT			API Number 4301350781
ocation of Well		:	Field or Unit Name
Footage: 03	200 FSL 0099 FEL	County : DUCHESNE	ALTAMONT Lease Designation and Number
QQ, Section,	Township, Range: SESE 6 4S 6W	State: UTAH	20G0005608
	11/1/2016		
EFFECTIVE L	DATE OF TRANSFER: 11/1/2016		
URRENT OP	PERATOR		
Company:	BILL BARRETT CORPORATION	Name: Duane	Zavadil
Address:	1099 18th Street Ste 2300	Signature:	m ZwW
	city DENVER state CO zip 80202	SeniorV	ice President - Government and Regulatory Affairs
Phone:	(303) 293-9100	Date:	20/14
Comments:	:	- 	
NEW OPERAT			
Company:	RIG II, LLC	Name: Jesse	McSwain
Address:	1582 West 2600 South	Signature:	Dese MG:
	city Wood Cross state UT zip 84087	Title: Mana	
Phone:	(801) 683-4245	Date:	120/14
Comments	:		
This space for S	state use only)	•	1 ,
Transfer ap	pproved by:	Approval Date:	11/3/16
	Title: VIC		

Comments:

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

TRANSFER OF AUTHORITY TO INJECT	
Well Name and Number SWD 9-36 BTR	API Number 4301350646
Location of Well	Field or Unit Name
Footage: 0539 FSL 0704 FEL	County : DUCHESNE CEDAR RIM Lease Designation and Number
QQ, Section, Township, Range: SESE 9 3S 6W	State: UTAH 2OG0005608
EFFECTIVE DATE OF TRANSFER: 11/1/2016	
CURRENT OPERATOR	
Company: BILL BARRETT CORPORATION	Name: Duane Zavadil
Address: 1099 18th Street Ste 2300	Signature: James Zawaki
city DENVER state CO zip 80202	Signature: Senior Vice President - Title: EH&S, Government and Regulatory Affairs
Phone: (303) 293-9100	Date: 10/7.0/14
Comments:	
NEW OPERATOR	
Company: RIG II, LLC	Name: Jesse McSwain
Address: 1582 West 2600 South	Signature: See WG-
city Wood Cross state UT zip 84087	Title: Manager
Phone: (801) 683-4245	Date: 1076110
Comments:	'
(This space for State use only)	
Transfer approved by:	Approval Date:
Title:	
Comments: This well curs ag	eprived by USERA.
COMMITTEE OF A	will be required.